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fueloil & oil heat

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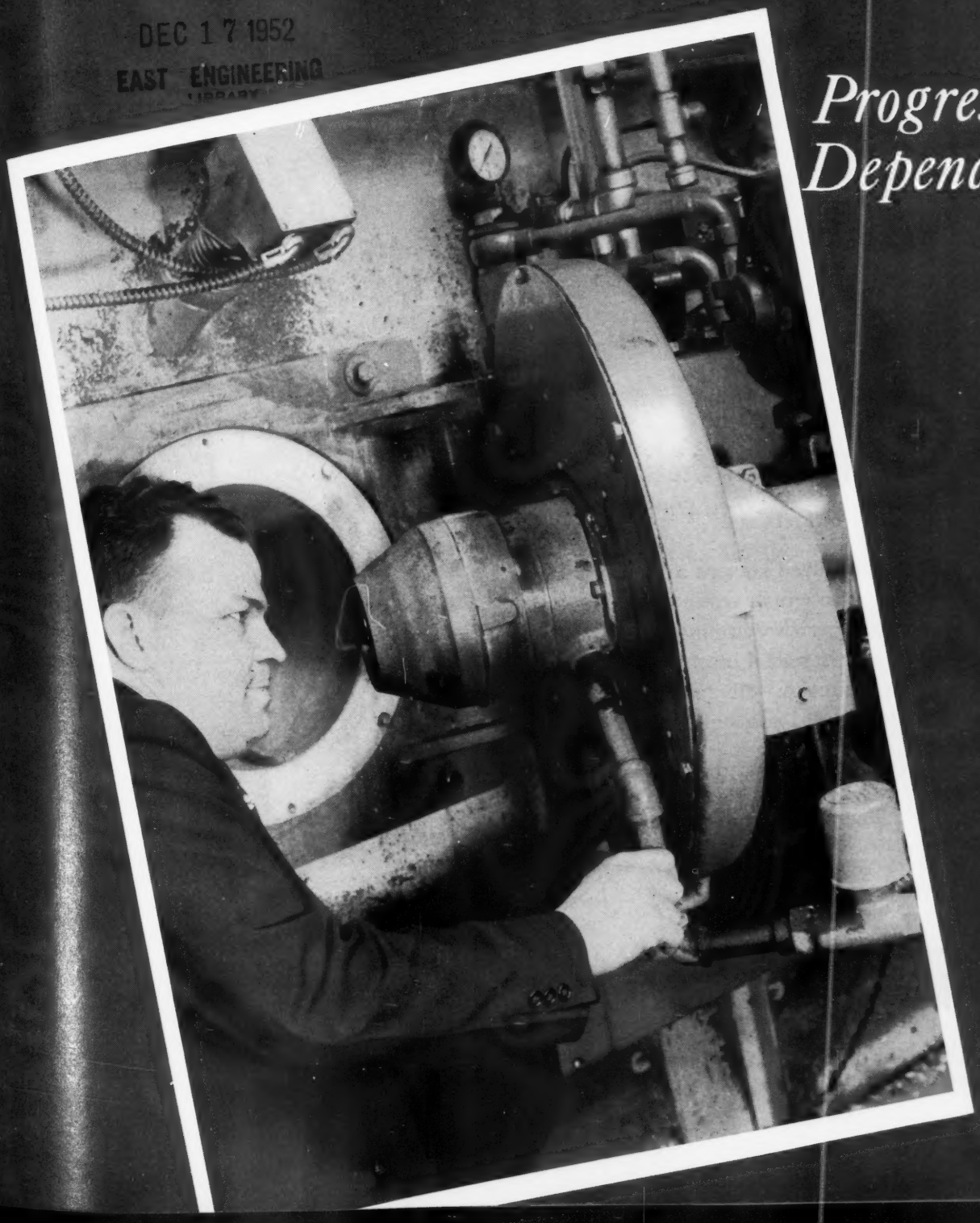

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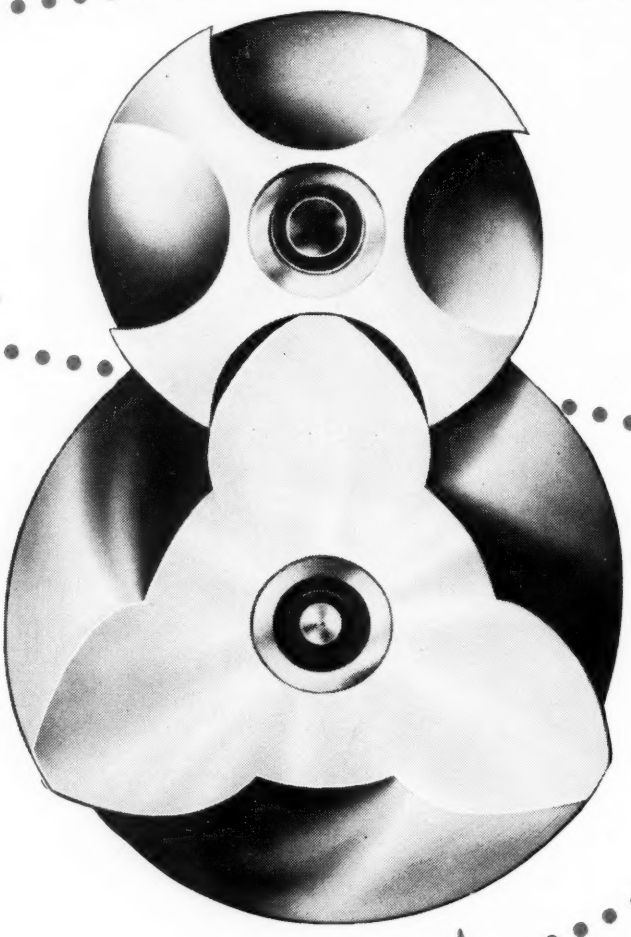

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- **Unaffected by fluid surges and shocks**
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- **True rotary motion—no reciprocating parts**
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The smooth vibrationless operation of Brodie BiRotor Meters contribute to their exceptional records of maintained accuracy and long trouble-free service—with low maintenance. Look into Brodie BiRotor Meters, today. *It's what's inside that counts.*

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DECEMBER fuel oil & oilheat 1952

VOLUME 11 NUMBER 12

CONTENTS

SUBJECT	PAGE	AUTHOR
Oilheating Outlook for 1953	43	PETER B. B. ANDREWS
Point of Sale	45	CHARLES BURKHARDT
It pays to Advertise—right!	48	DAVE WEPMAN
Warm air heating Applications	50	ROBERT C. RING
Better Service, more Sales	53	BERT DUNPHY
"Shut-down" Smoke	56	C. A. HATHAWAY
Objections overruled!	62	WILLIAM SHEPPARD
Oilheating public Relations	63	
Examination for big-burner Servicemen	84	JOHN SCHULZ

NEWS

Eastern burner Show scheduled for June	47
Texas Jobbers in management Session	55
Oilheating Ideas to feature Exposition	57
Sinclair adds Tanker to Fleet	58
API Meeting looks to increased Production	59
Rhode Island passes burner Regulations	65
Secondary storage held inadequate	76
Survey highlights small town Market	79
Toronto Pipeline in Service	80
OHI of N. E. announces Courses	82

DEPARTMENTS

6	Names in the News
10	Editorial Leaks
12	Oilheating Trends
18	Government on Fuels
98	Industry Groups
108	Manufacturers' Activities
117	New Products
144	Degree Day Table
147	Index to Articles 1952

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Among other things . . .

Peter Andrews is back with another of his forecasts on business activity for 1953. Once again he predicts a healthy year for oilheating and cites some very cogent reasons. He sees competition stiffening, too.

A look at Elliott-Lewis' service department follows, in which Burkhardt analyses its income and operational statistics. It is recommended reading if for nothing else but the description of how a peak force of 12 servicemen care for 6,700 accounts at a profit!

Then, on page 53 a different angle on service tells how an Aurora sheet metal dealer has become a successful oilheating outlet. Youngren admits he likes service work and goes after it whether or not he installed the oilburning equipment originally.

In the Commercial-Industrial section, Schulz comes up with another provocative examination, this one for "big-burner Servicemen." Starts on page 84.

Galongage

Preferred by —

Customers because it "tells" in gallons and has the most attractive appearance.

Dealers because of its convenient package, simple installation, reliability and customer preference.

Distributors and Jobbers because it costs less to ship and takes only ¼ of the storage space.

Galongage

Crown your installations with quality! Galongage accurately reveals contents of oil storage tanks in readings of 10's of gallons. Underwriters approved. Comes securely packaged in its sturdy cardboard carton which fits into serviceman's tool kit without fear of damage.

Quick, easy installation assured because Galongage requires neither assembling nor disassembling on the job.

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International

Approved by Underwriter's Laboratories, International is best of the lever arm type gauges for your lower price field. Factory assembled, its flexible float arm permits immediate oil-tight installation.

The large, easily-read numbers on the aluminum dial are calibrated in "eighths"

Fil-thru

Gauge, vent and fill-pipe all in one unit for 55-gallon drums. No tools whatever necessary for installation!

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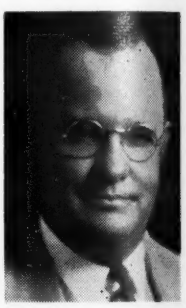
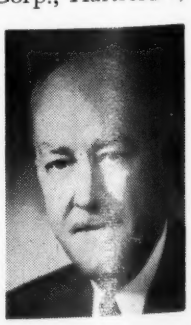


E. H. Davison has joined the Silent Glow Oil Burner Corp., Hartford 5, Conn. as vice-president and general sales manager to build up a strong dealer program, formulate general sales policies and merchandise the company's line of products. Plans underway include a new and broader line of equipment, wider distribution and expanded field sales organization. Davison has been with Williams Oil-O-Matic as gen-



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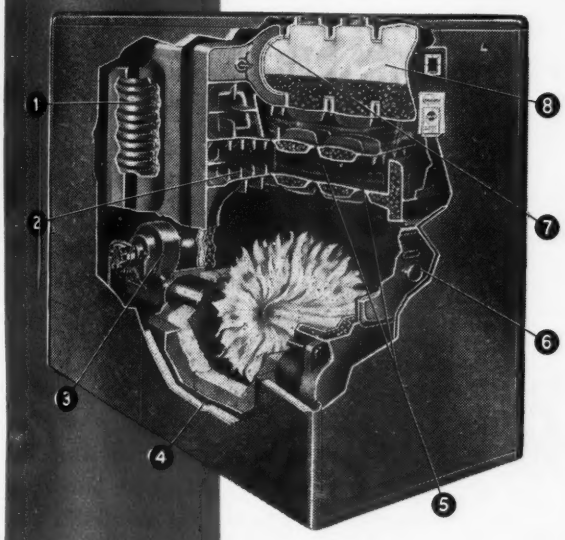
THE **OAKMONT** OIL BOILER has what it takes for today's competitive selling!



1. Built-in water heater (tank or tankless type)—provides constant supply of year 'round hot water.

2. Finned flue surfaces—extract maximum heat from hot gases as they pass to chimney.

3. Arcoflame Oil Burner—special flange model designed for Oakmont. Boiler and burner operate as a unit for top efficiency.

4. Insulated jacket — streamlined metal jacket in Forge Red, with heavy layer of insulation to prevent excessive heat loss.

5. Tight joints—machine ground contact surfaces of doors and sections prevent short-circuiting of gases, uncontrolled infiltration of air, and escape of odors.

6. Observation glass—for observing flame without opening door.

7. 7-inch nipples—extend below waterline and insure rapid circulation of boiler water.

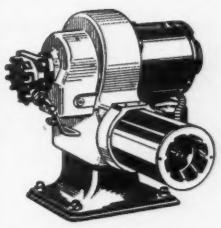
8. Steam space—especially large steam dome and releasing area insure dry steam at entrance to piping.

THE moderately priced Oakmont Oil Boiler is tops in the field of oil heating. Its good looks win the approval of even the most critical shopper. Its quiet, trouble-free performance provides the clean, comfortable warmth that keeps customers sold for life.

Designed for small to average sized homes by engineers who really know oil fuel, the Oakmont is built to give fast, economical heat.

You can install the Oakmont as a complete oil heating unit with its own Arcoflame Oil Burner, or you can sell the boiler separately for use with any other adaptable burner.

For more details about the Oakmont Oil Boiler, as well as information on American-Standard boilers for other fuels, contact your Wholesale Distributor. **American Radiator & Standard Sanitary Corporation,** P. O. Box 1226, Pittsburgh 30, Pennsylvania.



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Featuring the famous fuel-saving "sunflower" flame, the Arcoflame operates efficiently with No. 1 and No. 2 commercial fuel oil. Available with capacities ranging from 1 to 7 gallons per hour. Ideal for installation in new equipment or for modernizing old heating units.

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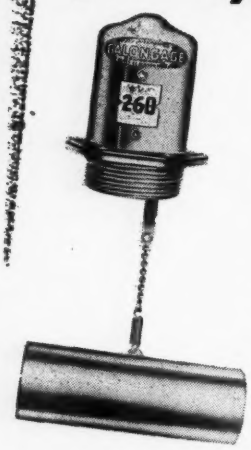

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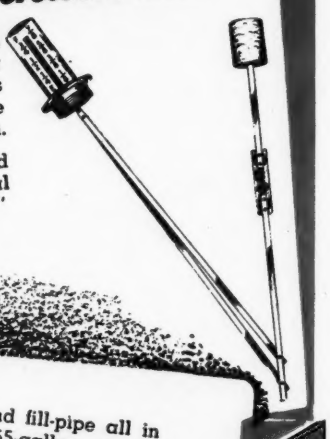

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Gauge, vent and fill-pipe all in one unit for 55-gallon drums. No tools whatever necessary for installation!

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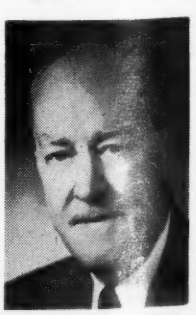

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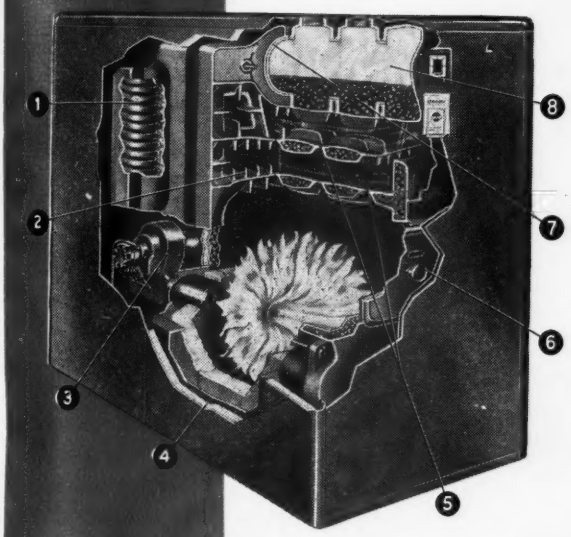

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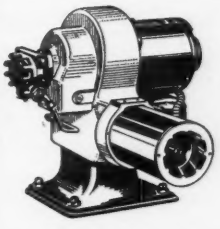

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eral sales manager since early 1949 and before that was with the same organization in various sales and sales management capacities since 1924. In the late 1930's for a period of five years he was with National Broadcasting Co. in Chicago.

Solomon R. Baker has been elected president, Pyrene Mfg. Co., Newark, N. J. Pyro, Inc., of which Baker is also president, purchased a majority stock interest in the fire fighting equipment company a few months ago. Announcement was also made of the recent election to the Pyrene board of directors of Abraham M. Sonnabend, of Boston, Mass., Samuel Botwinik, of New Haven, Conn., and Wilbur A. Cowett, of New York city.

B. L. Lerch and *Russell Strongman* have been appointed regional managers by General Controls Company. This follows upon its recent opening of a new manufacturing plant in Skokie, Illinois. Lerch, who formerly was Chicago factory branch office manager, will direct activities for the Midwestern territory. This will include supervision of offices in Minneapolis, Milwaukee, St. Louis, Chicago, Indianapolis and Des Moines. Strongman will be in charge of the Eastern Seaboard area, which covers branch offices in Newark, New York, Hartford and Boston.

Harry T. Kessler has been named president and treasurer, Tuthill Pump Co., Chicago, Ill.

N. G. Tuthill was elected vice-president and secretary. Kessler has served as executive vice-president of the company since 1943. In his new position, he will direct an expansion program which will introduce several new products into the Tuthill line.

M. J. Hackney has been appointed supervisor of sales training, Air Conditioning Div., General Electric Co., Bloomfield, N. J. Hackney joined the company in 1949. He served as a sales specialist of G-E packaged air conditioning equipment and refrigeration machines. Prior to coming to G-E, he was assistant sales manager of York Distributors, Inc. He has also been sales manager of the Sutherland Air Conditioning Co. and earlier was with the airconditioning controls division, Minneapolis-Honeywell.

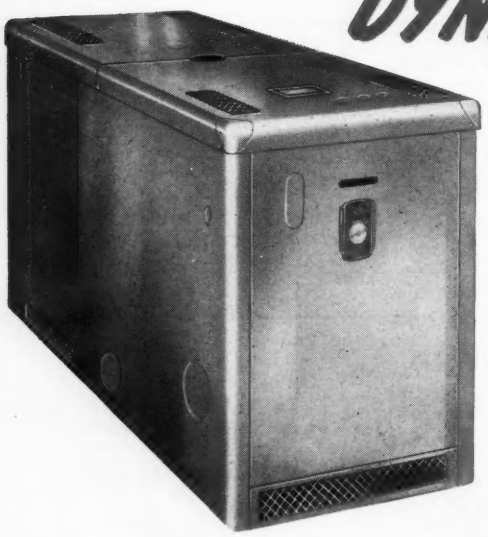
Leo C. McRoberts has been promoted from account executive by Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., to market supervisor in the appliance controls division. McRoberts will direct sales of automatic control equipment made in the firm's Los Angeles plant for the space heater market. He joined Honeywell in 1946 in the Kansas City sales office, and in 1950 was assigned to the Dallas sales office as sales manager of the wholesale division's southwest region. He became account executive in the Minneapolis office in October, 1951.

(*Please turn to page* 141)

To Clinch the Sale, just say:

MADE BY BETHLEHEM

The Bethlehem **DYNATHERM**



is manufactured by the Bethlehem Foundry & Machine Company, a 120-year-old institution known 'round the world for "The Best in Oil Heating—First." The Bethlehem DYNATHERM burns oil with a whirling flame whose action "scrubs" the utmost heating value from the fuel.

The Bethlehem DYNATHERM is a thoroughly engineered and strikingly attractive "package"—as different from conventional boiler-burner assemblies as it is superior to them!

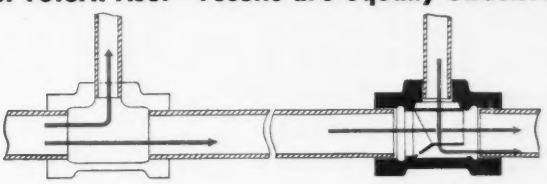
- ***Available in two sizes which cover full range of heating requirements.***
- ***Shipped with all controls mounted and wired.***

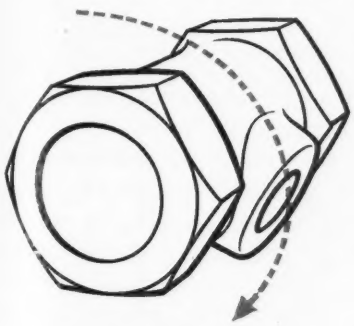
A few exclusive Bethlehem DYNATHERM territory Franchises still available. Wire or write to:

BETHLEHEM FOUNDRY & MACHINE COMPANY
BETHLEHEM, PENNSYLVANIA

ONLY ONE MONOFLO FITTING NEEDED FOR MOST INSTALLATIONS

Install a Monoflo Fitting at either the supply or return riser—results are equally effective





Special Down-feed Fittings eliminated

Different Monoflo Fittings for up-feed and down-feed radiators are not required. By *revolving* either a Supply Fitting or Return Fitting so that the riser opening is down, it can be used for down-feed radiators.

B & G Monoflo Fittings enable you to design a forced hot water system with assurance that it will be correctly and efficiently circulated. That's because the Monoflo Fitting is an *engineered* device—not just a "scoop" or "choke."

Under average conditions, *a single Monoflo provides ample diversion capacity!* In abnormally long pipe runs or where unusually large heating loads must be handled, a Monoflo Fitting may be required at both supply and return risers. Down-feed radiation likewise requires two Fittings.

Here's the important point! It would be no trick at all to build enough resistance into Monoflo Fittings so that one fitting would be sufficient under all circumstances. But remember this...*every average job would then be penalized with excessive resistance!* This is particularly true in large installations.

So why waste power... why over-circulate one radiator in order to properly supply another... why take a chance on a noisy system because of excessive water velocity. Use B & G Monoflo Fittings—*correctly designed for most efficient performance!*

Send for Bulletin DF-450 giving simplified Monoflo Design Table for smaller installations.

BELL & GOSSETT
COMPANY
Dept. CT-7, Morton Grove, Ill.

Canadian Licensee: S. A. Armstrong Ltd., 1400 O'Connor Drive, Toronto, Canada

Editorial Leaks

IN THE October 31 bulletin of the Northwest Petroleum Assn., Minneapolis, secretary Hiff Horning tells about very unorthodox fueloil deliveries being made in town. It seems that some local oil companies are delivering to homes that have no outside fill or vent lines.

The hose is dragged through the front door, through the living room and down into the basement to fill the tank. The Minneapolis fire chief is disturbed and asks the boys to please cut it out. In fact he promises the oil men that if they will quietly report the locations he'll put the bee on the homeowners.

You might say, "Now we've heard everything," but you haven't. What would you think of putting the oil straight into the furance?

It was in the earliest months of the Oil Industry Information Committee's existence. "Matty" Matheson was then president of the Oil-Heat Institute. He and Lon Casler were coaxing the public relations boys who made up OIIC to do something about oilheating instead of spending so much time and money on gasoline.

It was agreed that there would be a full page ad prepared for the big consumer magazines to glorify oilheating and there would not be a cheep about gasoline in it.

When the copy for the ad was finished it was checked with some of us to make sure that the words said what they should. But here was a big beautiful illustration occupying half of the page. It showed a cut-away view of a home. The family seated upstairs was enjoying life, as they should with such benign facilities.

The cut-away portion included the basement and there in all its glory sat a big green oil furnace. Outdoors against the house was a driver with his hose in the fill pipe making an oil delivery. The fill pipe, in this cut-away view, went through the basement wall and then straight as a shot into the side of the furnace . . . without benefit of tank.

Of course the picture had to be altered before the plate went to *Life* and the *SEP*. We claim credit for a lot of restraint for having kept this story secret for several years. It couldn't happen today because the man who now heads the Oil Industry Information Committee's output is Ed Esmay who years ago was associate editor of FUELOIL JOURNAL, one of the earlier names of this present magazine. Ed knows plenty about fueloil and oilheating and it's a good thing for all of us to have him in that spot.

❖

SIMPLE IDEA that works, is what it's called in the Anthracite Institute Bulletin, which pictured a cut-away view of a coal boiler showing half of the grate open and the other half covered by a copy of *Life* magazine. When you start the fire in early fall you spread coal over everything, but only the part above the open grate will burn.

The edges of *Life* will be charred little by little so the open grate size will increase as you approach cold weather. By Christmas, *Life* is gone and the maximum coal is being burned.

They obviously know it wouldn't work with a copy of FUELOIL & OIL HEAT. At the first blush of a coal flame it would most likely curl up and crawl right out.

❖

AND WHILE ON the subject of *Life* magazine, a very pleasant voiced young lady, who's developing a story on the composite American family, phoned to get help on a figure that would represent the total amount of heat or energy used to keep warm the total of all homes in the country. For the 43,133,000 houses we settled on 7,158,000,000,000,000 Btu. The oil phase of it, based on gallons consumed, was 1,904,000,000,000,000 Btu. That comes out at 26.59% of the total figure.

On the other hand, we have stated that 27% of American homes are oil-heated, so between the two approaches lies an error of 7,806,400,000,000, more or less.

❖

WRITING IN THE November 14 issue of "*Printers Ink*," columnist E. B. Weiss is deploring the fact that business magazines are too rarely read by salesmen. Salesmen are poor readers, in general, he finds, partly because so much of their time is taken up with bulletins, memos, catalogs, manuals and the dozen other things that are a part of their daily jobs.

Weiss feels that this neglect of reading an industry's principal publications results in shutting off "a never-failing and always-stimulating source of case histories and ideas."

How would it work for you to get a small sticker printed with the names of all of your people who should see FUELOIL & OIL HEAT? As it makes the rounds each man would check his name off. Alongside each man's name should be a short blank line for calling attention to items of special interest.

For example, if Smith sees an item on page 80 that Black should be sure to catch, he notes "p. 80" on the line after Black's name. In that way every man helps the other to hit the hot spots for him if he's too rushed to read it all. That's how to get the greatest value from each issue.

❖

AS WE ROUND the corner into the Holiday Season, when everybody likes almost everybody, even his competitors briefly, it comes to us rather forcibly that you folks in the industry have done a lot of nice things for us during the year.

Quite a number of you have put in time and thought to help with our industry studies by sending us your figures and your experiences on particular problems. You've cussed us out in clear tones when you didn't like what we did, and that's just as important as the nice things you've said.

So from our gang here to yours, may you have a fine Christmas and Prosperous New Year.

Bob Gray

in the palm of his hand—

There you are,
Mr. Fuel Oil Dealer!
Right in the palm of
your customer's hand.

Give him the best in service and he will stick with you for years. What's more, he will bring you new customers, too. And so you grow.

But give him less than what he may reasonably expect and he will go elsewhere — taking others with him. That's when you start to slip.

Today's fuel oil customer *expects* clean, safe fuel delivery; the kind that is just as automatic for him as his water and electric supply. The only real guarantee of such service is through the use of VENTALARM® Whistling Tank Fill Signal.

Start your "*keep the customer happy*" campaign right now. Install VENTALARM Signal on *all old tanks* this winter. It's easy. It's smart. And every signal will pay for itself the first season in delivery cost savings.

How can you afford *not* to do it?

For tanks already in use specify Model "LC" VENTALARM Signal (compression fitting type)

For new installations specify Model "LA" VENTALARM Signal (threaded type)

Over 4,000,000 VENTALARM *Signals now in use on home fuel oil, automotive and diesel tanks.*

SCULLY SIGNAL COMPANY

76 First Street
CAMBRIDGE 41, MASS.

Canadian Licensee: EMPIRE BRASS MFG. CO., LTD., London, Ontario

Contact your REGULAR SUPPLY HOUSE for VENTALARM Signal in a variety of sizes . . . and other Scully Fuel Oil Delivery Aids.

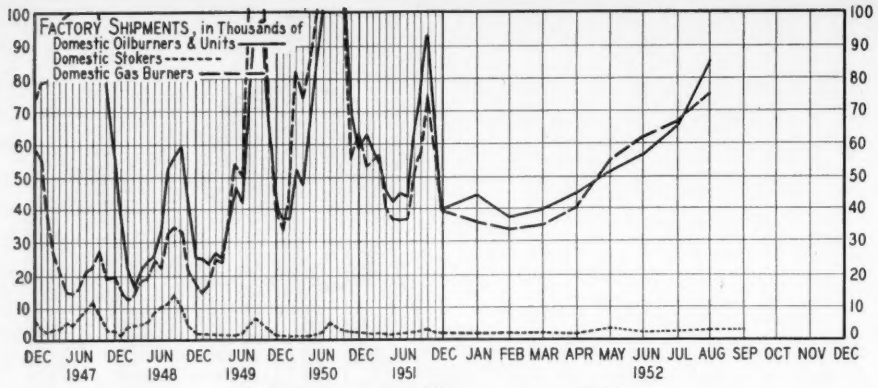
Scully Products are manufactured under U. S. & Foreign patents or patents pending.

VENTALARM® SIGNAL
Whistling Tank Fill Signal

SCULLY® TANK GAUGE
Easy-to-See Gauge
Simple, Sturdy, Economical

VENTALARM® TANK GAUGE
Combination Audible Signal and Visible Gauge

FASFILL® CONNECTOR
Portable connection for gun and fill pipes of all steel

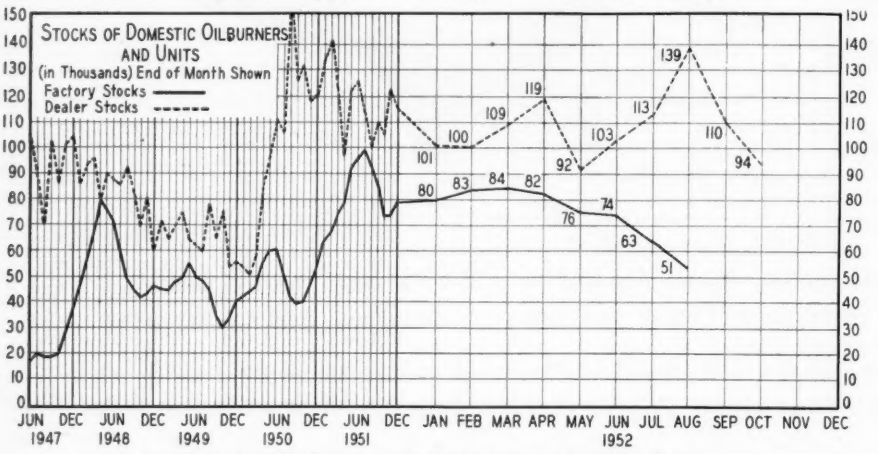

FACTORY SHIPMENTS, in Thousands of
Domestic Oilburners & Units
Domestic Stokers
Domestic Gas Burners
DEC JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1947 1948 1949 1950 1951 1952

Shipments of Oilburners and Units

(Including Exports)

Adjusted to include manufacturers other than the 145 reporting to Census Bureau, FUELOIL & OIL HEAT'S estimates of shipments are:

	AUGUST			EIGHT MONTHS		
	1952	*1951*	*Percent Change*	*1952*	*1951*	*Percent Change*
Conversion	58,907	46,282	+ 27.3	289,492	296,137	— 2.3
Boiler Units	7,081	4,385	+ 61.5	36,644	36,846	— 0.6
Furnace Units	19,871	12,815	+ 55.1	104,263	85,969	+ 21.3
All Domestic	85,859	63,482	+ 35.2	430,399	418,952	+ 2.7
Commercial	3,214	3,441	— 6.6	21,900	27,986	— 21.8
Total	89,073	66,923	+ 33.1	452,299	446,938	+ 1.2


STOCKS OF DOMESTIC OILBURNERS AND UNITS
(in Thousands) End of Month Shown
Factory Stocks
Dealer Stocks
JUN DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1947 1948 1949 1950 1951 1952

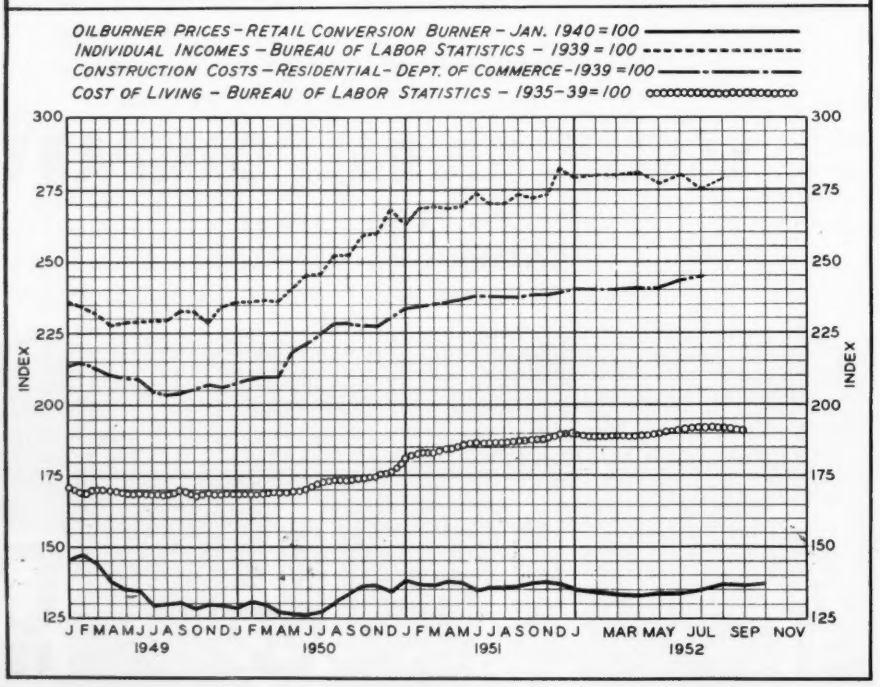
October Minimum Retail Price: Key Dealers

	CONVERSION BURNERS	BOILER-BURNERS	FURNACE-BURNERS
October Aver.	$320	$714	$641
September Aver.	321	694	641

Price Index: Conversion Burners: January 1940 is 100%

	WHOLESALE				RETAIL			
October	145.5	Six months ago	141.1	October	136.5	Six months ago	133.6
September	145.3	Year ago	137.8	September	136.1	Year ago	136.6

OILBURNER PRICES COMPARED TO GENERAL INDEXES


OILBURNER PRICES - RETAIL CONVERSION BURNER - JAN. 1940 = 100
INDIVIDUAL INCOMES - BUREAU OF LABOR STATISTICS - 1939 = 100
CONSTRUCTION COSTS - RESIDENTIAL - DEPT. OF COMMERCE - 1939 = 100
COST OF LIVING - BUREAU OF LABOR STATISTICS - 1935-39 = 100
INDEX
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1949 1950 1951 1952

Oilheating Trends

REVERSING the trend of the two previous months October installations of domestic oilburners and units showed a 7% drop from the previous year. The estimate for the month is 90,957 installations compared with 97,783 for October 1951. Total installations for the first ten months of the year are estimated at 593,926. This shows a 6% rise above the 561,778 last year.

The October installations were divided: New Homes 26,764; Replacements of old oilburners 13,537; Conversions from other fuels 50,656.

BURNER STOCKS: Dealer stocks of domestic oilburners and units declined during October from a start of 109,804 to close the month at 93,942. Last year on November 1st they were 105,575. The November 1 stocks this year were divided: Conversion burners 61,873; Boiler-burner units 17,551; Furnace-burner units 14,518.

TANK STOCKS: These showed some pickup during the month after having fallen to a very low point at the start. The month began with 65,695 customer tanks in dealer stocks and ended with 78,656. A year ago on November 1 they were 115,004.

By sizes the November 1 stocks were divided: 220-275 gallon 68,910; sizes 550-675 gallon 6,147; sizes 1000 gallons or larger 3,599.

The national average price for a 275 gallon tank at the end of the month was $39, up $1 during the month. By sections of the country the average was: New England $35; Mid-Atlantic $40; Midwest $36; Pacific Northwest $46.

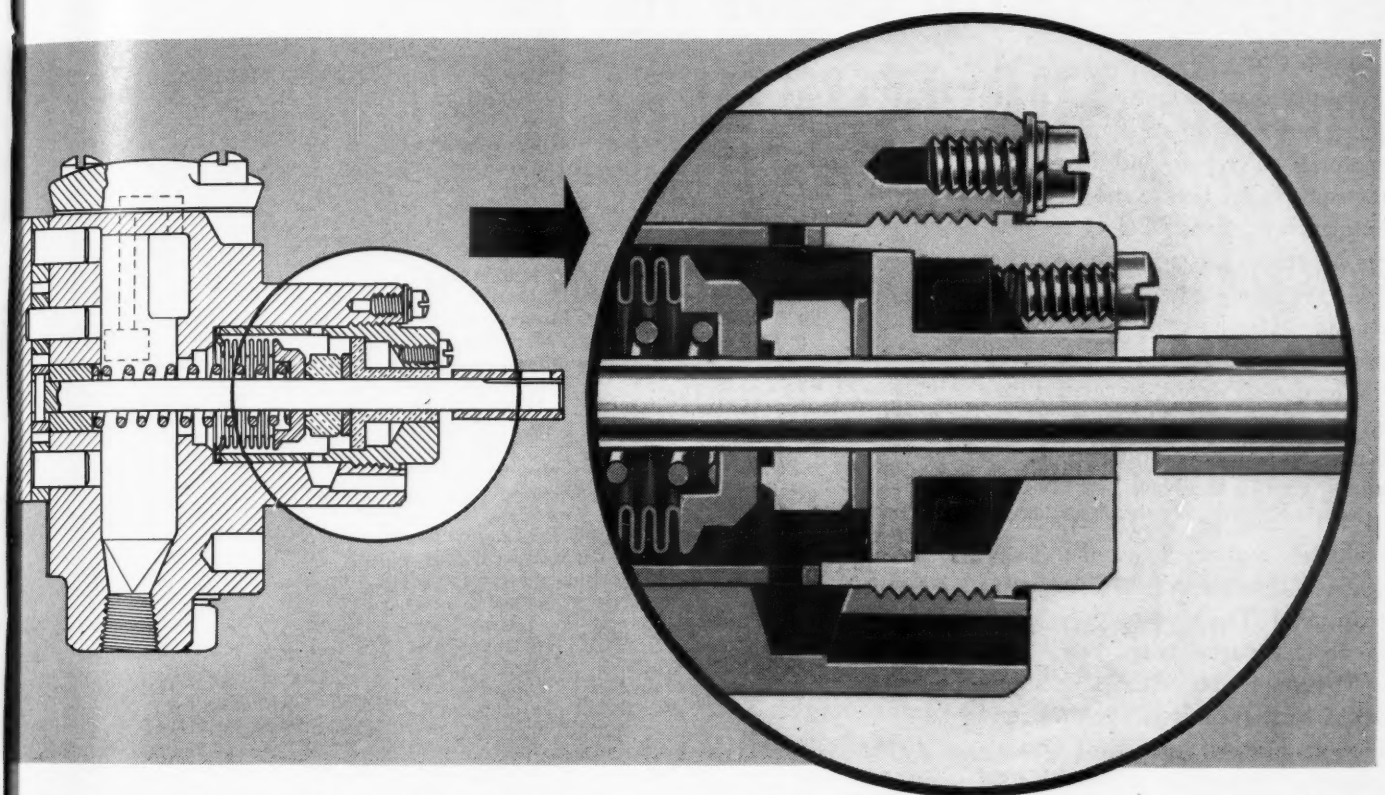
FUELOIL CREDITS: The fueloil distributors were asked about their present credit and collection situation compared with a year ago. Ten percent of those reporting say that collections are better now; 23% say they are worse and the remaining 67% say they are about the same.

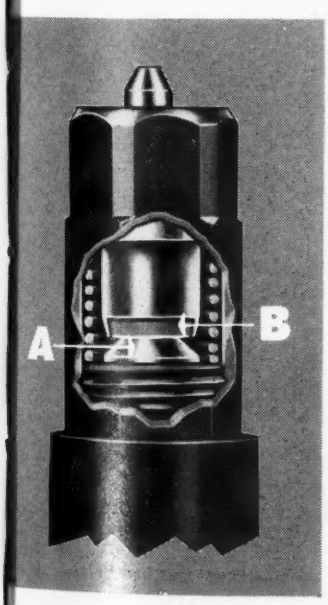
The oilmen were then asked how much their November 1 accounts receivable represented in terms of number of weeks' billing prior to that date. The composite figure for the group was 5.9 weeks. In other words, if a company's November 1 receivables were $50,000 that was also the amount

(*Please turn to page* 16)

design spells P-R-O-F-I-T-S

service oil heating equipment





Old Timer Serviceman says:

"The new valve assembly in the 6000 Series Fuel-unit is a world-beater! It always gives perfect sealing and positive cut-off, and keeps on sealing tightly after millions of operations.

"Look at the picture. You'll see what I mean: (A) the new crown-shaped stainless steel valve seat isn't affected by acids or moisture, and (B) the specially designed plastic valve disc is free from cold flow and deterioration."

Illustrated above are just a few of the outstanding construction details which make the 6000 Series Webster Electric Fuel-unit supreme in its field.

Sintered bronze outboard bearing: Lends unusual sturdiness and prevents misalignment vibration or pulley side thrust from being transmitted to the precise seal surfaces.

Lubricating cavity: The outboard bearing is lubricated by a grease-filled cavity of ample capacity.

Shaft diameter 5/16 inches: Ground to a surface finish of 10 micro inches. This small-diameter shaft, with its extremely smooth finish, in combination with outboard bearing, assures performance of maximum efficiency.

Similar units are made for sale in Canada by Canadian Acme Screw & Gear Ltd., of Toronto, under license by Webster Electric Company, Racine, Wisconsin, established 1909.

WEBSTER ELECTRIC

RACINE • WISCONSIN

"Where Quality Is a Responsibility and Fair Dealing an Obligation"

of total billing done in 5.9 weeks during October and part of September. A year ago the November 1 receivables of about the same group represented 5.1 weeks' billing and two years ago they were equal to 6.2 weeks' billing. In other words collections slowed down somewhat during the past year whereas they had been improving during the previous year.

EQUIPMENT INVENTORIES: Asked for a general impression of their inventories of repair and installation materials in relation to the volume of business being done, 32% of the dealers say they are too high. Another 24% say they are too low and the remaining 44% think they are just right under today's conditions.

The dealers were then asked if they were inclined to build up total inventories this winter in anticipation of a strong start of the New Year. No one of the reporting dealers expects to build his inventory higher than usual, while 30% plan to hold them lower than usual. The remaining 70% will do about the same as last year.

To be more specific the dealers were asked what their total inventories of burners, heating units, parts and accessories represent in terms of a total year's sales of equipment. They were asked to give this ratio for the peak-point of the year in early Fall and also for the low point at mid-Winter. There was surprisingly little difference. At the peak point inventories represent 24% of the year's sales. At the low point they represent 19%. This shows quite clearly that the dealers keep a rather minimum basic stock of about everything they will need and then order for prompt delivery the bulk of their equipment as they go along from month to month. This is probably influenced by the fact that so many of the smaller items that they buy are now handled mostly through local jobbers.

OIL SUPPLY CONFIDENCE: We saw last month that in spite of the very easy supply situation on heating oils at the present time, a great many fuel-oil distributors were still restricted by their principal suppliers on the amount they could get this season. This month they were asked if they were confident that they could get from their regular suppliers plus the open spot market all of the fueloil they will need regardless of how cold the winter may be. There was only one company from the reporting group pessimistic on this point. Each of the others is completely confident.

Oilburner* and Building Permits

OILBURNERS					DWELLINGS				
October		10 MONTHS			October		10 MONTHS	
1952	1951	1952	1951		1952	1951	1952	1951
43	98	420	605	Albany, N. Y.	..	..	..	..
221	332	1488	2611	Baltimore, Md.	390	479	2982	4242
..	..	..	..	Binghamton, N. Y.	9	9	90	104
..	..	..	..	Bloomfield, N. J.	28	12	91	107
..	..	..	..	Boston, Mass.	75	39	526	385
129	193	836	932	Bridgeport, Conn.	..	..	..	..
..	..	..	..	Buffalo, N. Y.	37	56	499	486
26	79	415	158	Columbus, Ohio	..	..	..	..
..	..	..	..	Des Moines, Iowa	..	89	..	777
..	1343	..	5107	Detroit, Mich.	279	325	3490	5667
111	70	502	491	Elizabeth, N. J.	2	0	65	43
54	63	342	367	Freeport, N. Y.	..	..	..	..
..	..	..	..	Greenwich, Conn.	38	27	359	369
..	..	..	..	Hackensack, N. J.	7	8	139	103
112	227	968	1555	Hartford, Conn.	..	..	..	..
..	..	..	..	Hudson County, N. J.	..	..	..	..
62	50	458	382	Irvington, N. J.	2	7	28	50
..	..	..	..	Lynn, Mass.	17	18	181	122
66	11	401	244	Meriden, Conn.	..	..	..	..
508	208	3909	931	Milwaukee, Wisc.	277	290	2513	2686
185	198	909	757	Minneapolis, Minn.	112	116	1001	1254
37	36	241	244	Montclair, N. J.	..	..	..	..
..	..	..	..	Morristown, N. J.	6	3	49	25
59	48	325	278	Mt. Vernon, N. Y.	..	..	..	..
281	302	1941	1707	Newark, N. J.	..	..	..	..
77	115	998	639	New Bedford, Mass.	..	..	..	..
77	84	579	484	New Haven, Conn.	..	..	..	..
..	..	..	..	New Orleans, La.	..	..	..	..
..	69	..	424	New Rochelle, N. Y.	61	16	261	137
..	8276	..	34207	New York City (total)	..	..	..	..
..	7470	..	28677	Brooklyn-Queens	..	..	..	..
783	806	5959	5530	Manhattan, Bronx, Rchd	..	..	..	..
85	85	711	1278	Norfolk, Va.	70	72	1063	841
..	..	..	..	Oakland, Calif.	..	..	..	..
257	143	923	753	Omaha, Nebr.	99	78	992	867
28	33	203	202	Orange, N. J.	2	0	19	33
36	28	252	227	Passaic, N. J.	..	..	..	..
117	101	771	599	Paterson, N. J.	35	19	186	170
..	1505	..	7640	Philadelphia, Pa.	..	..	..	..
..	..	..	..	Plainfield, N. J.	20	21	154	167
118	127	513	596	Portland, Me.	18	11	106	143
..	464	..	3874	Portland, Ore.	197	101	1372	1286
36	45	170	212	Poughkeepsie, N. Y.	..	..	..	..
110	152	985	828	Providence, R. I.	..	25	..	235
..	..	..	..	Reading, Pa.	7	6	66	74
36	49	352	577	Richmond, Va.	32	41	499	547
..	99	..	630	Roanoke, Va.	..	..	..	..
406	445	3052	2446	Rochester, N. Y.	..	..	..	..
21	39	145	137	Rockville Center, N. Y.	4	1	62	99
160	306	1422	1750	St. Louis, Mo.	40	33	457	574
106	149	475	714	St. Paul, Minn.	114	157	1100	1078
84	69	381	307	Salem, Mass.	3	8	50	76
17	2	264	534	Schenectady, N. Y.	..	..	..	..
..	..	..	..	Seattle, Wash.	162	142	1583	1615
..	..	..	..	Springfield, Mass.	64	174	710	783
..	52	..	508	Stamford, Conn.	..	..	..	..
12	8	89	45	Syracuse, N. Y.	48	35	428	306
..	..	..	..	Trenton, N. J.	6	5	119	64
..	..	..	..	Utica, N. Y.	22	12	164	130
227	298	1093	1018	Washington, D. C.	..	..	..	..
..	..	..	..	West Orange, N. J.	35	53	367	351
49	64	309	351	White Plains, N. Y.	10	11	127	95
122	185	657	848	Wilmington, Del.	10	39	177	242
287	370	1653	1639	Worcester, Mass.	..	..	..	..
144	145	706	647	Yonkers, N. Y.	..	..	..	..
4462	5036	29002	29763	*Totals*	1970	2018	16501	19689
—11.4		—2.6		*Percent Change*	—2.4		—16.2	

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.

FUELOIL STOCKS: Stocks of No. 2 fueloil at refineries, terminals and in transit east of the Rockies on November 8 were 105,195,000 barrels. On the corresponding date last year they were 92,091,000 barrels.

(*Please turn to page* 142)

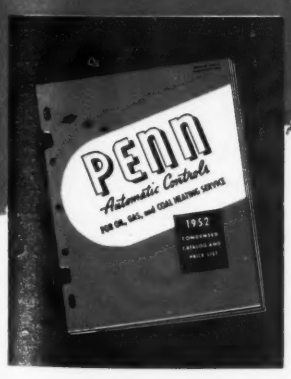
only PENN gives you all these great features in WARM AIR controls

Type 520 Combination Fan and Limit Control with easy to read "sight-set" dials.

Type 518 Safety Limit Control for warm air systems with any type of fuel. Also available in Type 519 Fan Control.

DON'T SETTLE FOR ANYTHING LESS!

- **Faster response to temperature changes.**
- **Greater accuracy over entire operating range.**
- **Easier to install . . . generous wiring space.**
- **Can be mounted in close quarters in any position or at any angle.**
- **Small, compact, light in weight, yet sturdy.**
- **Sensitive, liquid-filled power element.**
- **Self-compensated diaphragm.**
- **Compact, snap-acting contact structure.**
- **Dust-proof, tamper-proof switching mechanism.**
- **Silver contacts with high current carrying capacity.**
- **Heavy contact pressure for positive electrical performance.**
- **Simple "sight-set" calibrated dial.**
- **Once set, differential remains constant.**
- **"Summer Fan On" position on dial.**
- **Plus other profit features to assure long-life dependability to *keep your heating customers sold on you!***



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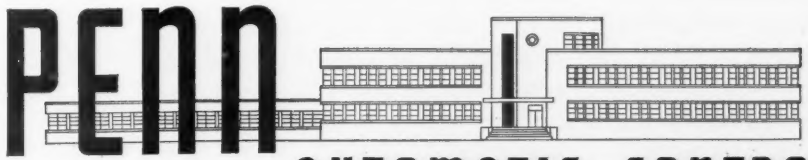


AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, PUMPS, AIR COMPRESSORS, ENGINES, GAS RANGES

Government Influences on Fuels

by
Milburn Petty

WASHINGTON—There isn't the rush now to drop all economic controls that prevailed right after the elections.

Republicans have adopted a "wait-and-see" attitude—even such stalwart foes of regimentation as Senator Capehart of Indiana.

In the oil industry, the "top brass"—as represented by the American Petroleum Institute's board—declined to recommend decontrol. Producers are eager for it; independent refiners are not, and insist that any crude advance be reflected in higher product prices.

Independent marketers, despairing of any margin relief from the Office of Price Stabilization, are willing to take their chances in a free economy and want price controls lifted.

Actually—what happens, depends on Korea. If a step-up there puts greater demands on the domestic economy, then controls will be continued.

All bets are off, however, if President Truman should decide to dump controls, hoping thereby to embarrass the incoming administration.

Price Controls Called "Weak"

Just before Tighe Woods, OPS director, quit—because, he said, the controls law was "too weak" to deal with inflation—he issued a blast predicting that decontrol now would mean "immediate" increases in prices on some key items.

Fueloil was among the commodities which, according to Woods, would jump in price with ceilings removed.

For awhile, it appeared that the Woods blast was a prelude to President Truman's leaving decontrol on the doorstep for General Eisenhower.

Steel Men Push For Decontrol

The steel industry is driving hard for removal of all allocation controls on April 1, next, except for military and atomic energy orders.

Officials of the Defense Production Administration have suggested easing of controls on April 1 and killing them on June 30 except for military and atomic energy priorities. (This assumes that the new Congress will continue some kind of super-priority system after the end of June when the Defense Production Act expires.

The Petroleum Administration for Defense has been worried that decontrol would mean that the pipe mills—without directives to obtain their steel requirements — would produce less pipe for production and pipeline uses than at present. And there is not enough now.

New Policy on Tanker Charters

The military has adopted a new policy on chartering of tankers. Instead of voyage charters, they are now entering into long-term contracts—up to five years.

They have been able to obtain offers of up to about 30% off USMC rates on new supertankers to be built.

Bids also have been asked for long-term charters on T-2s and other existing tankers. Result of this may be a narrowing of the "spot" market for tankers available to private shippers.

Fueloil Probe Extension Urged

Shell Oil Co. has denied charges of the Federal Trade Commission that it has made dealers handle Shell fueloil exclusively. Dealers are not required to buy all their requirements from Shell nor sell this oil under the Shell brand—but contracts do contain "reasonable" maximum-minimum quantity provisions, Shell said.

Meanwhile, FTC officials would not say whether similar cases were being prepared against some other major suppliers.

But the FTC, they said, is investigating a "number" of complaints from individual fueloil dealers complaining of being cut off by their suppliers.

PAD's Supply Worries Vanish

Even the PAD officials, who had been pressing refiners for all-out operations to augment East Coast heating oil supplies, are now ready to admit that the situation "looks OK unless we have a prolonged spell of severely cold weather."

Mild weather, plus secondary storage 86% full on September 30, banished the fears of any East Coast shortage.

In fact, some refiners now believe that the PAD may have "overdone it" in assuring adequate supplies on the East Coast.

Reflecting the high-level of refinery operations was the recent report by the Armed Services Petroleum Purchasing Agency that offers of jet fuel (which is about 65% distillate) have oversubscribed ASPPA's requirements to June 30, next, by more than six million barrels.

And it was just a few weeks ago, that the military was complaining of shortages of jet fuel offers.

Oil Critics Rise in Congress

Republican dominance of the new Congress brings to the fore several members who have been critical of oil matters on occasion.

Senator Langer, North Dakota, who has shown a friendliness for legislation to divorce oil marketing from the rest of the industry, will head the Senate Judiciary Committee.

Chances have improved for enactment of the Kerr Gas Bill, declaring that the Federal Power Commission has no control over field prices for natural gas — except that Senator Tobey, New Hampshire, a foe of this bill, will head the Senate Interstate Commerce Committee.

Rep. Dewey Short, Missouri, who will be remembered for recommending drastic steps—including rationing, if necessary—to assure ample military oil supplies in 1947-48, again heads the House Armed Services Committee.

Another perennial oil investigator, Rep. Welverton, New Jersey, returns to the chairmanship of the House Commerce Committee.

New Oil Study Expected in Senate

The Senate Interior Committee's study of national fuels policy—which the oil and gas industries feared might lead to "end use" controls—died with the defeat of Senator O'Mahoney (D., Wyoming). The new chairman, Senator Butler (R, Nebraska), has little interest in petroleum—but he may give a free rein to Senator Malone (R., Nevada) to set up an oil subcommittee such as he headed in the 80th Congress.

fueloil & oilheat

Oilheating Outlook for 1953

Board of 300 Analysts forecasts 4% Gain over 1952

by

Peter B. B. Andrews*

ALTHOUGH SOME MARKET planners visualize a slowing down of business in the latter part of 1953, the majority judgment of the Board of Analysts of Future Sales Ratings is that installations of oilheating equipment for the year 1953 will slightly exceed those for 1952.

Consensus of estimates is that domestic central heating burner installations, including some small commercial heating, should exceed by about 4% the 1952 anticipated full year installations of approximately 700,000. The 1952 figure thus would be ahead of the 1951 total of 675,000 installations, but both 1953 and 1952 totals would remain under the big 846,815 total of the panic-buying year 1950.

These estimates are based on the views of the 300-man Board of Analysts of Future Sales Ratings. The Government - and - private - industry economists and marketing men on this Board, with whom the writer is associated as supervising economist, have been forecasting for 18 years in *Sales Management* the sales prospects for the 100 leading industries of the United States (including oilburners), with the outstanding record in the country, a batting average of 86% accuracy. The Board has assigned the oilburner industry one of the top sales ratings of five stars for the next 12 months' prospects.

Indicated sales and production potentials for the oilburner industry would not be attainable under any possible tightening of Government restrictions. However, the Board regards the situation as bright in this respect. Besides more liberalized allotments of materials for the oilburner manufacturer on the basis of high essentiality and basic need for the nation's comfort and welfare, the Board anticipates (barring the unlikely outbreak of World War III) a rapid improvement in raw material supplies for civilian durables, even in copper and alloyed steels, during the progress of the year 1953.

The consensus conclusion of the Board is that whether it be through appeals because of the unquestionable necessity of heating equipment or whether it be through an over-all easing of raw material supplies and ultimate lifting of controls, or intensified endeavor to use some substitute materials, or by a combination of all these developments, the output of oilburners is likely to advance increasingly—to the extent that heavier advertising and promotion will be necessary to move the enlarged production into end-use channels.

Thus, if given all the materials it needs and assuming that advertising, promotion and selling endeavor is adequate, the oilburner industry could, in the view of the Board, produce and sell at least 4% more oilburners in 1953 than in 1952.

Potential demand is major motivation in this belief. The Board believes again, as it has repeatedly indicated in forecasts considered optimistic in past years, that both residential and general construction will be better than many authorities in the building trades now anticipate.

The need for new homes is far greater than generally realized, reflecting the record-breaking rate of population increase in the nation and the continued large numbers of improperly-housed married couples of recent years. Population is noted as rising at the rate of almost 3,000,000 persons a year.

Such growth is equivalent to adding, in a single month, a new state with a population about the size of Wyoming; in six months a population larger than Colorado's; in a year, a population as large as Iowa's. This strong national growth—taking place as it is in a dynamic and productive economy — represents significant forward momentum in requirements of all sorts, including the very basic one of housing. The 3,000,000 additional population growth coming in 1953 will make the cumulative growth since 1945 more than 20,000,000 people.

The material shortages of the last world war radically set back the fulfillment of the high housing needs. In fact, all through that war and since, housing needs have failed to catch up and the unfilled margin is steadily increasing. A fundamental view of this situation is found in the following computation showing the disparity between home building of recent years and the marriage totals of those years.

The tabulated figures show clearly

Year	*Home Building Starts*	*Marriages (U. S. Total)*	*Difference*	*Cumulative Difference*
1951	1,091,300	1,594,904	503,604	14,472,933
1950	1,396,000	1,667,231	271,231	11,969,329
1949	1,025,100	1,579,798	554,698	11,698,098
1948	931,300	1,811,155	879,855	11,143,400
1947	849,000	1,992,354	1,143,354	10,263,545
1946	670,500	2,291,045	1,620,545	9,120,191
1945	209,300	1,612,992	1,403,692	7,499,646
1944	141,800	1,452,394	1,310,594	6,095,954
1943	191,000	1,577,050	1,386,050	4,785,360
1942	356,000	1,772,132	1,416,132	3,399,310
1941	706,100	1,695,999	989,899	1,983,178
1940	602,600	1,595,879	993,279	993,279
TOTALS	8,170,000	20,642,933	12,472,933	12,472,933

*Supervising Economist, Future Sales Ratings.

the underlying mass demand for homes and, accordingly, for oilburners as the most popular heating accessory. It will be observed that the cumulative difference between homes built and marriages is 12,472,933, and the current figure is close to 13,000,000. Housing and the outfitting of homes that goes with it is running far behind the marriage rate, and there is bound to be pressure in the years ahead to make up this backlog. Even if only half these married couples were eventually to get new homes, that would be over 6,000,000 couples to be housed and outfitted out of current backlog, and the year ahead will add to the backlog as new marriages take place. Accordingly, rather than the reduction anticipated by some in residential housing for 1953, the Board forecasts at least as many new housing starts as in 1952; in other words, another minimum 1,000,000 housing year.

Construction to be active

Construction of all types, even heavy building, is visualized by the Board as likely to be active in 1953, with over-all small change from the approximate $33,000,000,000 of aggregate construction expenditures estimated for the full year 1952. Particular uptrends in schools and hospitals are anticipated.

Additionally, the modernization market is regarded by the Board as exceptionally large in the field of heating equipment, not only in the large percentages of the nation's aging homes but also in the field of commercial buildings and institutional structures throughout the country.

Regarding the large heating modernization market (the potential is estimated by the Board as at least one-sixth of all the nation's homes), the Board makes particular note of successes of other industries in modernization promotion—such as last year's "Old Stove Roundup" campaign.

Backed by an advertising budget of over $1,500,000, the aim was to sell 1,500,000 ranges valued at $300,000,000 retail. Participants included 800 utilities, 62 range producers and 40,000 appliance retailers. The drive lasted three months, and features of the program were tie-ins with Hollywood, contests ("oldest stove," "chuck wagon" range building for boys, and contests for children reporting old equipment), parades, door-to-door selling, street demonstrations, etc.

The campaign was a great success and was followed by a spring 1952 program aimed at some 15,000,000 homes estimated to have old, replaceable equipment. One leader of the campaign when questioned about its objectives, replied: "A look at the organization of our competitors, from the top of the industry down to its dealer program, should convince any of us that those who seek to take over our basic loads not only are willing to research and advertise their products, but they are actually spending their money on the largest promotion of its kind ever attempted in this field." This, of course, drives home the point of needing to compete keenly—and the Board is unanimous in the belief that the months ahead will see sharper competition, not only in the oilheating industry but throughout most of the economy.

Abundant Fueloil

At least, the oilheating industry is visualized as having a number of competitive advantages, including an abundance of fueloil at favorable competitive prices, the modern, automatic and progressive character of its equipment and the reasonable price of this equipment in relation to the present plane of over-all prices.

Considering these factors in the background of the good financial condition of both the public as a whole and general industry, as well as the broadening of the market through population increases and marriages, the Board justifies its rating of promising potentials in the oilburner industry for 1953.

The public's (and that of the entire business economy) generally favorable income and savings status is impressive. Additions by the public to such liquid assets as currency, deposits in mutual savings banks, demand and time deposits in commercial banks, shares in savings and loan associations and Government securities, expanded about $5,000,000,000 during 1952, to a total of $240,000,000,000.

The solid, tangible backlog of reserve spendable money for many goods, including oilburners, buttresses the present record-breaking rate of personal income. Current disposable income of the nation's population is exceeding an annual rate of $233,000,000,000, which is far above the average of the year 1951, which totaled $225,000,000,000, or 1950 which totaled $205,500,000,000.

Disposable Income up

For perspective, to show how far the country's buying power has advanced, disposable personal income was $75,700,000,000 in 1940, less than one third what it is now. Additionally, the position of general business is better financially than at any time in the nation's history. That indicates ability to finance modernization of heating facilities in commercial, industrial and institutional buildings. The nation's current assets industrially are more than twice current liabilities, and the remaining net working capital after debts exceeds $90,000,000,000 for the country's corporations alone. Similarly, agriculture is in a strong position, well able to finance extra purchases.

Aggregate employment — always a good indicator of potential demand for oilheating equipment—is expected by the Board to exceed 62,200,000 in 1953, more than a million above the average employment rate this year. Importantly, too, these people will be making more money than they did in 1952 or previous years. Average gross weekly earnings may come close to $70 in 1953, which would compare with $67 in 1952, $65 in 1951, $60 in 1950 and $25.20 in 1940.

The present high level of personal savings forms a financial backlog which dwarfs personal credit loans, and this backlog is considered to give its owners a sense of security which makes for spending current income more freely. Thus, people have the money, generally, to buy; and business has enjoyed profits—even after increased taxes—high enough to provide strong incentives for modernization and expansion programs. The result, for the industrious people of the oilburner industry, should be favorable in the months ahead.

Point of Sale

Earnings substantially increased by oilburner service Department sales Efforts

by
Charles Burkhardt

THE SERVICE DEPARTMENT of the Elliott-Lewis Corp. of Philadelphia has a markedly successful record for making money on its operations. These earnings are not due to any bookkeeping hocus-pocus, but are the results of a long-standing policy of making the Service Department a productive factor in the money-making end of the oilheating picture.

A clean-cut operation, that involves the employment of 12 service men at time of peak operation during winter and 5 men during off-peak summer working time, the department shapes up as being moderate in size but efficient in overall performance. An analysis of the productivity of these servicemen bears some close scrutiny. During winter the 12 men average 10½ hours per day of working time for a 6 day week, making considerable overtime as is usual at that time of the year. This contrasts with slack season employment of 5 men, (the operating minimum), for an average of 8 hours per day for a 5 day week.

Men are transferred from the Installation Department to the Service Department when work in the former department eases off. In winter the servicemen average 10 calls for an 8 hour day, which means they spend 48 minutes on a call including traveling time. This is nearly tripled on the summer clean and check calls, which average 120 minutes each.

One of the reasons that Elliott-Lewis servicemen can hold their single call operating time, including travel time, down to the very low figure of 48 minutes is the geographic nature of the operation and its equipment specialty phase. There are 30,000 Delco burners in the 15 mile area surrounding the company offices, and service is held almost exclusively to Delco accounts.

The limited geographic area with a high concentration of a single brand burner admirably adapts itself to a well-planned service operation. Care exercised by Harold Ottey, the Dispatcher, who has been with the company for over 7 years, prevents servicemen from making overlapping runs.

Geographic routing saves time and money for the company as well as adding to the good humor of the men. Couple this limited geographic burner concentration with a type of service devoted almost entirely to a single brand burner and the efficiency of the result is almost obvious.

Not only is traveling time drastically reduced, but the mechanical techniques developed by constantly servicing a single brand burner results in a familiarity with the service problem that leads to quick diagnosis and rapid solution—a big time saver and an important contribution to an operation that must be efficient to make money in a highly competitive business.

Quiet and practical George Moore, the Service Manager, an Elliott-Lewis veteran of nearly 16 years, estimated that they average 2 calls per account per year with about 2% of all calls made requiring a callback.

The department services 6,700 accounts through the year. They are predominantly Delco burners. Of these, 5,500 are fueloil accounts. Service contracts are held on 2,500 of these accounts and 4,200 are non-contract accounts. Of the 4,200 non-contract accounts, 1200 come in for the annual clean and check service and the remaining 3,000 are on an emergency service, charge-per-call basis only.

There are three different types of paid service in the Elliott-Lewis setup. These are:

1. The Delco burner service contract for oil customers only. This contract includes parts, emergency service and the annual clean and check as well as a vacuum cleaning. It costs the customer $17.50 per year.

2. The annual summer service clean and check independent of the contract This costs the customer $9.75.

3. Emergency service paid for on a call basis. This is charged for at a rate of $3.90 per hour or any fraction thereof, and an additional $3.90 for each additional hour or fraction. For service calls made after 4:30 p.m. on weekdays as well as on Saturdays or Sundays, the charge is $4.90 for the 1st hour and $4.90 for each additional hour or fraction thereof. Thus, on emergency service, rates go up approximately 25% on all calls made after 4:30 p.m. or on Sundays or holidays. The result of the surcharge has been to cut down night and holiday service by 20% to 25%.

Service Income

ELLIOTT-LEWIS CORP.—PHILADELPHIA

2500 accounts at $17.50 contract	$ 43,750
1200 additional summer overhauls at $9.75	11,700
2500 contract accounts at additional $12.40 worth of sales per account	31,000
Emergency service (non-contract) call income (approximate)	35,550
TOTAL INCOME (approximate)	$122,000

In addition, in order to adequately compensate the Service Department for the work it has to do on new burner installations while they are under guarantee during the warranty period, the Sales Department pays to the Service Department over a 1 year period an average of 2½% of the gross retail sales income. This payment comprises a considerable portion of the Service Department's income.

It is, however, an important, practical and psychological factor in spurring the Service Department to assist in and stimulate selling activity. In addition the servicemen get a commission on each service account brought in as well as on all new equipment sold as a result of leads turned over to the Sales Department.

Both Henry MacAvoy, General Manager, Heating Division, and Jack Campbell, Vice-President, was enthusiastic when they talk about the

sales activity of their Service Department. According to Campbell, "servicemen are service salesmen" and they sell service contracts and repairs as "preventive service." The whole philosophy of management is that the Service Department is the "point of sale." With such a viewpoint, the Service Department is the springboard for further sales activity in all fields, fueloil, repairs, replacement and new equipment.

In this company the Service Department is not looked upon as a necessary profit-consuming evil but as an aid toward further sales profit, a refreshing and stimulating as well as profitable viewpoint. The practical effect of this line of thinking is immediately evidenced by the fact that for each of the 2,500 $17.50 service contracts customers, the contract is the "point of sale" for an additional $12.40 worth of business above the contract amount per account, per year—a practical translation of a business philosophy into a gross increase in earnings of nearly $30,000 per year.

Some of the specific items for which the Service Department is the "point of sale" are new combustion chambers, fuel tanks, hot water hookups, water tanks, furnace blowers, furnaces, boilers, draft controls, clock thermostats and other miscellaneous items.

Service makes a Profit

Henry MacAvoy is emphatic in stating the whole philosophy of operation very succinctly: "The Service Department makes a profit because everyone in it is trained to look at every transaction as the lead point for additional sales."

Recently Jack Campbell had a cost analysis made on 300 accounts picked at random, that were under the $17.50 service contract. The purpose of this breakdown was to find out just where the company stood on gross earnings in respect to these contracts. The result was very favorable. For each $17.50 contract the costs to the company were as follows:

Labor Cost	$8.70
Parts Cost	$ .97
Total Cost	$9.67

This shows a very comfortable margin of operation. Elliott-Lewis feels, however, that in addition to this favorable contract picture they also make profit on the summer clean and check service. However, they don't make money on spot emergency service calls.

Clean and checks are sold all year around except during September and October when they are avoided. Actually 15% of all the clean and check service is done from November to March. This spreadout over the full year was not easily accomplished and required a consistent, hard-hitting educational effort that was two years in the doing before becoming effective. However, the effort has paid off with an orderly dispersal of clean and checks throughout the calendar year.

In addition to all the standard external service given to Elliott-Lewis customers by the Service Department, it also engages in extensive internal service operations. This includes its own repair shop under the direction of Roy Mateer. In this repair shop the rebuilding and reconditioning of defective parts is undertaken. The shop is completely equipped and all burner parts such as pumps, valves, motors, etc. are rebuilt or reconditioned like new. The same rebuilding is done with controls that are brought in by the servicemen. Elliott-Lewis has been doing this rebuilding work for 15 years and considers it an important part of its service operation.

The budget plan method of paying for fueloil whereby customers make identical monthly payments over a period of ten months to cover their annual fuel bill, is also used to include the $17.50 parts service contract plan. If the budget plan is used for fueloil payments, the customer pays the additional $1.75 per month for the ten months. This has substantially increased the number of accounts taking service contracts. A recent mailing was made to increase the number of accounts using the budget plan for fueloil purchases. The result of the mailing was good but what is more interesting, it brought in 250 additional service contracts on the budget basis. Campbell plans further action in using the budget plan as a tool to increase the number of service contracts.

While there have been years in the recent past wherein the annual gross service income has exceeded $200,000, this year the annual service budget will be in the neighborhood of $120,000.

Service Department costs are accurately checked and charged. All servicemen's wages, all parts and material, all office salaries (Service Department), travel and car expenses, office supplies, postage and similar items are directly charged to Service Department costs. No rent, light or executive salaries, however, are charged to the department, which does all its own billing. Operational costs remain fairly constant according to Campbell.

So rigid and detailed is the cost accounting system that if one of the clerical force works half a day in the Sales Department and half the day in the Service Department the salary costs are split and charged proportionately to each department. In view of

Operational Statistics

ELLIOTT-LEWIS CORP.—PHILADELPHIA

EMPLOYMENT:	12 men at peak 5 men at minimum load
PRODUCTIVITY: (basic 40 hour week)	10 calls per 8 hour day at peak 48 minutes average per call 4 summer overhauls per 8 hour day 120 minutes average per call
NUMBER OF ACCOUNTS SERVICED:	6700 *SERVICE ACCOUNTS* 2500 service contract accounts 1200 additional summer clean & checks 3000 emergency service accounts
SERVICE CONTRACTS:	Parts & service contract $17.50 per year Summer service clean & check $9.75 Emergency service $3.90 per hour Emergency service after 4:30 p.m. and Saturdays & Sundays $4.90 per hour
ADDITIONAL SERVICE INCOME:	Average additional business on each $17.50 service contract account amounts to $12.40 per year or a total of $29.90 per contract service account. This results in an additional $31,000 of gross service income.

this the profit statement of the departments are fairly arrived at and no figure juggling is involved.

The general operation of Elliott-Lewis is a large one and according to Henry MacAvoy, 26% of the combined retail and wholesale burner sales in Philadelphia for the month of September were made by Elliot-Lewis; for the first nine months of 1952, 19% of the total Philadelphia wholesale and retail oilburner sales were reached by the hard-hitting Sales Department.

The oilheating operation of Elliott-Lewis began in October of 1932. At that time the company established itself as a Delco distributor and dealer and engaged in both wholesale and retail burner operations. Two years later it added the retail distribution of fuel-oil and was thoroughly launched into the automatic oilheating business.

Eastern burner Show scheduled for next June

PRELIMINARY PLANS for the 1953 Eastern Biennial Oil Heat Exposition have been announced by the Oil Heat Institute of New England, Boston 15, Mass., who will sponsor the affair. It will be an exposition only, not a convention, and will provide for 116 booth spaces on the mezzanine floor of Boston's Hotel Statler, June 2 through 5. The booths are to be available in 8 x 10 ft. sizes, with rentals from $400 to $450, and in any multiple of this basic size up to 10 by 40 ft.

The only formal session planned for the week will take place during the morning of Friday, June 5 and is to consist of a round table forum. The exact format has not been worked out yet, but in all probability, members of the forum will consist of representatives of major oil companies, fueloil and oilburner dealers, selected for their background and experience to discourse on specific phases of the oilheating business.

The Exposition itself will open on Tuesday, June 2, and will remain open on that day and the next two days from 1:00 to 10:00 P.M. On the final day, the exhibits will be open from 1:00 to 6:00 P.M.

Joseph Olney, Jr., Olney & Payne, Pawtucket, R. I., is president of the Oil Heat Institute of New England and Fred N. Beckwith, 839 Beacon St., Boston 15, Mass., is executive secretary. Beckwith, who is supervising arrangements for the Exposition, explains it as an extension of the New England Exposition, which the Institute has been sponsoring and at which registration up to 5,000 has been reached. Next year, when the invitation to attend will be extended to all oilheating dealers and their personnel east of the Mississippi River, it is hoped that more than 7,000 will register.

Beckwith believes that the unusual early interest in the Exposition displayed by prospective exhibitors results from the high level of business the industry has maintained this year, the excellent prospects for 1953 and "the fact that this will be the only major Oil Heat show during 1953." Because of this, plus the fact that the Exposition is scheduled immediately after the close of the heating season, show week is offered as an excellent time for manufacturers to schedule their sales meetings for Eastern personnel.

Floor plans and other details are going out to a general mailing list with exhibit space to be allotted on a first come, first served basis.

A view of a section of the last burner show sponsored by the Oil Heat Institute of New England, showing the general layout of exhibits which will be followed in the Eastern Biennial Oil Heat Exposition, scheduled for June 2 to 5, 1953 in Boston. Two rooms on the mezzanine floor of the Hotel Statler in Boston are to be set aside for equipment exhibits.

❖

Tom G. Bridge has been appointed district sales manager by Century Engineering Corp., Cedar Rapids, Ia.

Bridge's territory will be in Century's East Central district, which includes southern Ohio and Indiana, Kentucky and eastern West Virginia. Previous to his joining Century, Bridge was a Procurement Authority Q.M.C. Inspector for 18 months. Prior to that, he was employed as South-Central district representative with Fairbanks-Morse & Co., Stoker and Heating Div., from 1943 to 1951. He owned and operated a retail heating concern for ten years.

It pays to Advertise -- right!

Telling the oilheating Dealer when, how much, where and what Kind of Advertising to use

by

Dave Wepman*

FROM TIME TO TIME the editors of this publication have been kind enough to put into print some of the various thoughts of this writer on the never-changing, yet always new subject of "how to sell an oilburner." Each of these various thoughts has approached the subject from a slightly different angle and each may have seemed to offer a substitute for the one truly time-honored method—the personal call. This article will attempt to discuss the subject of advertising. Before we plunge into this discussion, however, the writer would like to make one very definite statement as clearly as possible. That statement is this: "The only successful way of selling a piece of automatic heating equipment is to take the briefcase under the arm and go out and make a call."

Everything else that we discuss as a means of gathering prospects, arousing interest, creating what might be called the proper "climate" for selling automatic heating equipment, is at best an adjunct to the personal sales call. There has never been and cannot ever be a substitute for the personal call.

This is the "old-time religion" and the writer is the very last man who wants to be accused of heresy—he believes, as every successful salesman in the field does, that the only way to sell heating equipment is to go out and sell it.

But in our complex world and in the present state of our industry, it can be admitted that even the finest salesman can use help. Advertising in all of its forms represents valuable help and the writer would like to discuss some of the forms of this advertising, some of its pitfalls and some of its advantages.

*Merchandising Manager, York-Shipley, Inc.

Advertising takes many forms and the advertising of automatic heat can and should follow all of these forms—wherever and whenever they can be proven effective. While our emphasis in this particular article is on the subject of dealer advertising, some comment should be made on the desirability of handling a nationally advertised product. The writer has no wish to enter into an argument as to whether heavy expenditure (and consequent high costs) in so-called consumer advertising on the national scale is desirable, but he thinks its worth while to mention that the nationally advertised brands in any field are almost always the top quality brands and that the "unknown" brands are almost always of lower quality.

Whether your manufacturer advertises over the radio, out-of-doors, in the magazines, by television or by any other method, the chances are that if he does a consistent national advertising job at all, he has found it necessary to make a product which will bear examination and stand comparison. By associating your business with the nationally advertised product, you not only gain whatever added prestige the effectiveness of that advertising makes possible, but you remove from your own mind, as well as from your customers, the fear of doing business with a little-known or unknown manufacturer.

What Kind of Advertising?

But how about your own retail advertising? What kind should you do? How much should you spend? Where should you spend it? How do you write an ad? These are questions which every dealer would like to have answered. Let's see if we can set down then some of the answers to these questions.

The commonly known advertising media are newspapers, radio, television, outdoor advertising, telephone directory advertising, direct mail advertising and what might be called promotional advertising, which includes such "fringe" media as installation signs, car cards, theater film advertising, handbill advertising, etc. All of these media have proven satisfactory in individual cases — all of them work, and the problem that faces the dealer is which form is most effective for him.

No one can answer this question definitively from a distance, but here are some accepted comments on the various media. Radio, television and big city newspapers make sense for the big dealer in the big market with big volume and the big advertising budget. Smaller newspapers, telephone directory advertising, outdoor advertising and direct mail advertising fit the small dealer equally well.

If your budget will stand it, try to use more than one type and remember what you are trying basically to do in any advertising — get the most prospects per dollar spent.

How much should You spend?

The better manufacturers (and this will include every manufacturer who advertises nationally) offer their dealers some form of cooperative advertising plan. This cooperative plan ordinarily pays from 25 to 50% of the total cost of advertising featuring that manufacturer's product. Ordinarily, the funds available from this cooperative advertising source are determined by the amount of merchandise you buy from that manufacturer. Your own manufacturer's plan is probably well known to you. Using it as a basis you can estimate your purchases from the manufacturer and add to it a fixed percentage of your own dollar volume to arrive at an overall advertising budget. Incidentally, most specialists in the field estimate that the percentage of your sales to be expended in advertising should run from 3 to 5%.

Some manufacturers, my own included, are willing to cooperate with the aggressive promotional-minded

dealer far beyond the amount "earned" by past volume, and will cooperate in effective advertising programs on the basis of the merit of the program itself and of the sales activities of the dealer. These manufacturers are investing in futures, believing that strong advertising coupled with strong selling efforts will always pay off.

Some words of warning regarding this advertising budget should be set down: (1) plan it for a full year, and stick with it; (2) allow a portion of your budget for unforeseen expenses; (3) work it out in complete detail; (4) remember that it takes continuing advertising to do a job.

In planning your advertising program for the year, remember that the individual advertisement or advertising activity is almost always ineffective. Advertising, to serve any purpose, must be repeated time and time again. Remember that you are trying to remind the reader of your name and to couple it with the nationally advertised brand and remember that people generally are prone to forget. No matter how well you do any one single advertisement, its effect is slight unless you can do it over and over and over again.

So, when you plan your year 'round advertising, do it in "package" form. Allot enough money from your overall budget to cover not one newspaper advertisement, but a series; not one radio program, but a series; not one car card, but a series: not one direct mail piece, but a series. The size of your budget will determine how many of these you can afford to include in the overall "package." All advertising should be broken down by seasons, and in our industry it is well to consider a spring "package" and a fall "package," thus striking your prospects when they are most interested in our product.

Where to Advertise?

In selecting the media it is well to remember to use those which seem to strike closest to the kind of prospect from which you draw most of your business. In other words, if your business emphasizes new construction work, both the subject matter and the media must be aimed at the owner, contractor or builder of new homes. If your business set-up is directed towards the replacement market, the home owner is your prospect and what you say and where you say it must be governed accordingly.

How do I write an Advertisement?

The answer to this question is that the chances are you don't. Most cooperative advertising plans (again for the better manufacturers) include a good many effective advertising mats for newspapers, scripts for radio use, and in some cases, films for television or theater showing. These have been prepared by experts in the field to do exactly the job you are setting out to do. Dealers sometimes feel that these "national" advertisements don't seem to fit their local market and many of them are anxious to prepare their own advertisements. Once again most manufacturers are perfectly willing for the dealer to do this as long as he features the national brand.

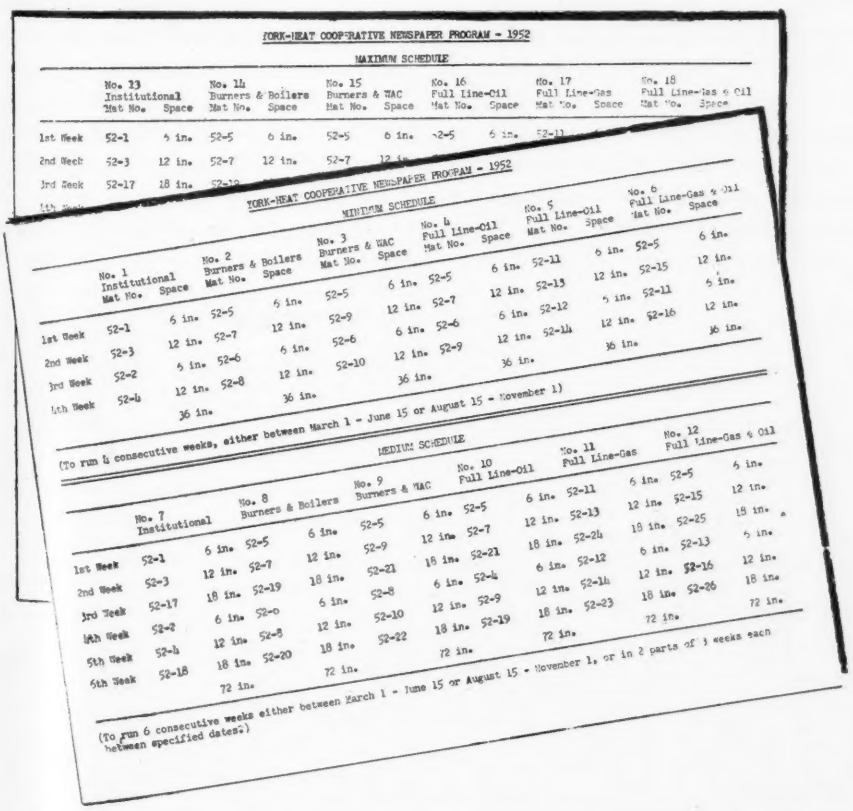
My own company is anxious to have personalized and localized advertising, where possible, but asks the dealer to use its Advertising Department in making these up, where this can be done, and in any event to submit for approval special campaigns in order to use most effectively the services of its specialists in the field. In the direct mail field, most manufacturers offer effective direct mail pieces for dealer use.

In the foregoing paragraphs we have attempted to say some few words on the subject of where to advertise, when to advertise and what to advertise. These three questions and their answers may seem to cover the entire field and perhaps they do, except for one very important fourth one, and that one is—follow your advertising.

Follow up your Advertising

It may seem to the reader that we are belaboring the obvious to say that advertising must be followed up effectively, closely and immediately; and yet all of us have known of many cases when mail and telephone prospects or suspects have been allowed to remain unfollowed in the dealer's place of business for days on end. Remember one basic fact about prospects which

(*Please turn to page 138*)



YORK-HEAT COOPERATIVE NEWSPAPER PROGRAM - 1952

MAXIMUM SCHEDULE

	No. 13 Institutional Mat No.	Space	No. 14 Burners & Boilers Mat No.	Space	No. 15 Burners & WAC Mat No.	Space	No. 16 Full Line-Oil Mat No.	Space	No. 17 Full Line-Gas Mat No.	Space	No. 18 Full Line-Gas & Oil Mat No.	Space
1st Week	52-1	6 in.	52-5	6 in.	52-5	6 in.	52-5	6 in.	52-11			
2nd Week	52-3	12 in.	52-7	12 in.	52-7	12 in.						
3rd Week	52-17	18 in.	52-19									

YORK-HEAT COOPERATIVE NEWSPAPER PROGRAM - 1952

MINIMUM SCHEDULE

	No. 1 Institutional Mat No.	Space	No. 2 Burners & Boilers Mat No.	Space	No. 3 Burners & WAC Mat No.	Space	No. 4 Full Line-Oil Mat No.	Space	No. 5 Full Line-Oil Mat No.	Space	No. 6 Full Line-Gas & Oil Mat No.	Space
1st Week	52-1	6 in.	52-5	6 in.	52-5	6 in.	52-5	6 in.	52-11	6 in.	52-5	6 in.
2nd Week	52-3	12 in.	52-7	12 in.	52-9	12 in.	52-7	12 in.	52-13	12 in.	52-15	12 in.
3rd Week	52-2	6 in.	52-6	6 in.	52-6	6 in.	52-6	6 in.	52-12	6 in.	52-11	6 in.
4th Week	52-4	12 in.	52-8	12 in.	52-10	12 in.	52-9	12 in.	52-14	12 in.	52-16	12 in.
		36 in.		36 in.		36 in.		36 in.		36 in.		36 in.

(To run 4 consecutive weeks, either between March 1 - June 15 or August 15 - November 1)

MEDIUM SCHEDULE

	No. 7 Institutional		No. 8 Burners & Boilers		No. 9 Burners & WAC		No. 10 Full Line-Oil		No. 11 Full Line-Gas		No. 12 Full Line-Gas & Oil	
1st Week	52-1	6 in.	52-5	6 in.	52-5	6 in.	52-5	6 in.	52-11	6 in.	52-5	6 in.
2nd Week	52-3	12 in.	52-7	12 in.	52-9	12 in.	52-7	12 in.	52-13	12 in.	52-15	12 in.
3rd Week	52-17	18 in.	52-19	18 in.	52-21	18 in.	52-21	18 in.	52-24	18 in.	52-25	18 in.
4th Week	52-2	6 in.	52-6	6 in.	52-8	6 in.	52-4	6 in.	52-12	6 in.	52-13	6 in.
5th Week	52-4	12 in.	52-8	12 in.	52-10	12 in.	52-9	12 in.	52-14	12 in.	52-16	12 in.
6th Week	52-18	18 in.	52-20	18 in.	52-22	18 in.	52-19	18 in.	52-23	18 in.	52-26	18 in.
		72 in.		72 in.		72 in.		72 in.		72 in.		72 in.

(To run 6 consecutive weeks either between March 1 - June 15 or August 15 - November 1, or in 2 parts of 3 weeks each between specified dates.)

York-Heat's *co-operative advertising plan separates into 18 seasonal "packages," offering a maximum, medium and minimum campaign, divided by products. The dealer simply chooses the overall "package" which best suits his needs.*

Warm air heating Applications

A Discussion of three large Systems and the Factors that mean good installation Techniques

by
Robert C. Ring

A NUMBER of months ago a series of three articles was written discussing primarily the various general types of warm air heating systems and the components comprising these systems. The succeeding articles will describe a number of actual installations.

In progressing from the residential and small commercial application—wherein simple heating to maintain minimum indoor temperatures is the prime objective—to larger commercial and institutional applications such as offices, schools, churches, hospitals and auditoriums, various additional factors must be considered and applied in order to obtain the best overall solution to the particular problem. These include such items as air supply to maintain minimum ventilation standards, cooling for complete all year systems, zoning, air distribution and diffusion to minimize drafts or objectionable air movement, continuous fan operation, controls, noise and filtering.

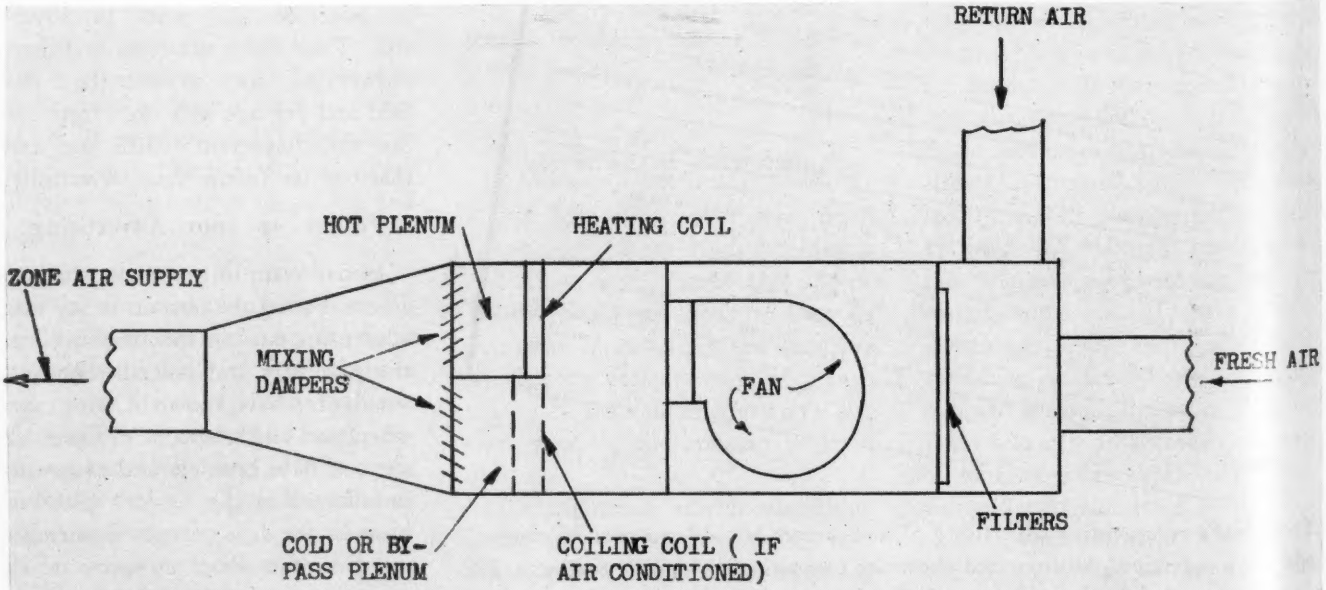
A particular installation, recently completed, is an addition to a hospital, which serves the dual function of convalescent home for patients needing nursing care but not complete hospital facilities, and an old folks home wherein elderly, retired people are provided with care and living quarters for the balance of their lives. The building is single story, U-shaped, of masonry construction on concrete slab and with pitched roof providing some attic space. Since the addition is located at some distance from the existing building and the existing services were inadequate anyway, a boiler and equipment room was provided in a portion of the partial basement.

In order to provide for the future addition of mechanical cooling to the system, a multi-zoned, forced air system with continuous fan operation and steam tempering coil was selected. Air quantities were kept to a minimum since occupancy is much like that of a residence plus the fact that high rates of air change with continuous fan operation would greatly increase the likelihood of complaints from the elderly occupants. Air is supplied through high wall, diffusing type outlets connected to supply ductwork run through attic passages. Return air is ducted from each room, and at intervals in the corridors, back to the equipment room through underfloor, formed concrete ducts with grilles at baseboard height.

Corridors are supplied with air only at the ends where doors open to the outside. In a cold climate, of course, additional air would have to be supplied at intervals along the corridors. The rate of air change is about 6 per hour and the supply air consists of 80% return and 20% fresh air. Since the system is designed for future cooling, the proportion of fresh air was made minimum for the sake of minimum installed cooling capacity and the nature of the application doesn't require a high proportion of fresh air to maintain acceptable indoor conditions.

The equipment room layout consists of a steam boiler, air compressor for the pneumatic control system, supply fan, filters, steam coil, mixing dampers, interconnecting piping and plenum chambers. The main plenum is full height floor to ceiling, partitioned into a filter section and a fan section with return and fresh air duct connections to the filter section and fan discharge connection to the hot and cold plenums. In the absence of the cooling coil, a static pressure plate is installed to better balance the pressure between hot and cold plenums.

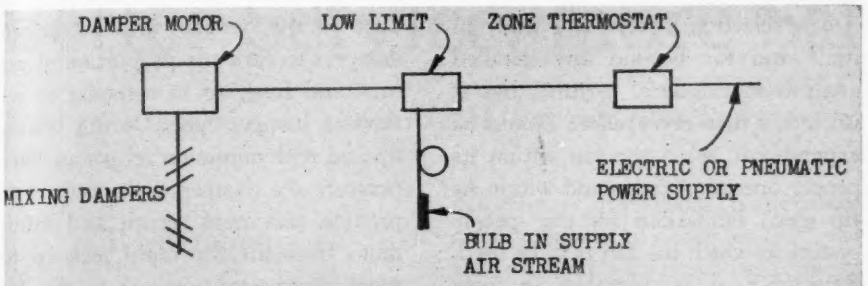
Mixing dampers, one pair for each zone, are installed in the plenums on



Schematic *equipment elevation, heating and ventilating system.*

the discharge side of the heating coil and static pressure plate which dampers vary the proportion of heated and by-pass air as required by zone thermostats or low limit controls. The fan is double inlet, double width type mounted on an anti-vibration base and connected to the plenums with flexible canvas cloth.

The system is divided into ten zones with a minimum of two and a maximum of four rooms per zone. Zoning is largely by exterior exposure since the internal load is practically constant throughout the building. Four zones are taken off direct from the plenums in the equipment room; the other six, due to the long duct runs between coils and room outlets, take off from extended hot and cold plenums carried to the vicinity of the zones. This arrangement improves the temperature control of these zones since the time lag between damper movement and arrival of the air at the zone is kept to a minimum.



Typical *zone control system.*

The control system is pneumatic, each zone consisting of hot and cold plenum mixing dampers, zone thermostat and low limit, located in the zone duct beyond the plenums to position the dampers and maintain a minimum supply air temperature entering the zone. The hot plenum is equipped with a thermostat controlling a modulating valve in the steam line to the coil, the valve also being controlled by outdoor temperature so that the plenum temperature is varied in proportion to outdoor temperature. In this way, the basic temperature control function is removed from the dampers so that they can serve as trimmers to compensate for the difference in heating load between zones. Some fuel saving is also effected since the overheating that usually occurs with rapidly rising outdoor temperature is largely eliminated. The boiler cycles, under the control of its own pressure switch, to maintain the system steam pressure.

This type of multi-zoned system with a number of zones side by side across the heating coil points up a problem with systems using steam coils. A long steam coil, even with distributing tubes, will not continuously carry steam entirely across the full length of the coil, particularly at light load, consequently, the last portion of the coil is mostly full of condensate and functions as a hot water coil at a much lower BTU output per square foot of face area than as originally selected for steam operation.

This difficulty may be avoided by one of two methods: If certain zones require air of much lower temperature than other zones, these zones can be placed at the condensate end of the coil where they will receive less heat. Or two or more steam coils can be placed end to end, as was done in the installation described above, so that the length of coil between steam inlet and condensate outlet is short, thus permitting the entire coil to fill with steam.

Another recently completed installation is a central fire station in which complete, automatic heating and cooling is provided. Continuous fan operation is provided with filtered air and proportions of approximately 70% return and 30% fresh air. In this instance, heating is by means of a hot water boiler and hot water coil, cooling by direct expansion using a motor driven compressor. As in the hospital installation, this system uses hot and cold plenums and mixing dampers with a total of five zones—all dampers are installed directly at the plenums on the discharge side of the coils.

Four zones, comprising offices, recreation room, kitchen, showers, bedroom, control room and shop, are provided with both heating and cooling; the fifth zone, comprising the apparatus room, is provided with heating only by means of hot water unit heaters with thermostatically controlled fans. With the exception of two downstairs offices and the shop, all air conditioned areas are on the second floor, hence both supply and return ducts are overhead through the attic space with combination supply and return, ceiling mounted diffusers. The shop is equipped with a low wall return grille with manual damper so that the return from this area may be shut-off, when necessary, to prevent sucking odors into the system.

The boiler is equipped with a three-way, modulating valve with electronic outdoor temperature reset to vary the supply water temperature to the heating coil, and consequently the hot plenum temperature, in proportion to outdoor air temperature. The mixing dampers then serve as trimmers to balance the zone load variation. The hot water circulating pump and refrigeration system are controlled by outdoor temperature so that above the temperature at which no heating is required the pump shuts off and below the temperature at which no cooling is required the refrigeration system is de-energized. These cut-out and cut-in points overlap to some extent since the refrigeration system must be operative as long as the internal load exceeds the capacity of the mixture of return and cool fresh air to maintain the zone conditions.

Hot and cold plenum System

In this arrangement the refrigeration system cycles as required to maintain the cold plenum temperature as determined by the plenum thermostat and the mixing dampers proportion the air as required by the zone conditions. This hot and cold plenum system permits completely automatic heating and cooling, without circuit reversals or crossover, and simultaneous heating in one zone and cooling in another.

The control system on this installation is electric due to the small num-

ber of zones. It functions, however, in similar fashion to the pneumatic system and, in general, the same end results can be accomplished by either pneumatic or electric controls. The exact choice of system depends upon various factors such as first cost, maintenance, accessibility, simplicity and explosion hazard.

At this point, a few words concerning noise would be appropriate. Noise is a subject which was not covered to any extent in the previous series of articles and it is a problem or factor not to be overlooked due to the difficulty or impracticability of effectively reducing noise once the installation is completed. Objectionable noise in a system may be due to any one or a combination of several factors. Some of these, such as poor duct construction, flexible connections, excessive velocities or tip speeds are reasonably controllable while others, such as bearing noise, motor hum, expansion and contraction noises may be difficult to control or may require considerable experimentation to overcome.

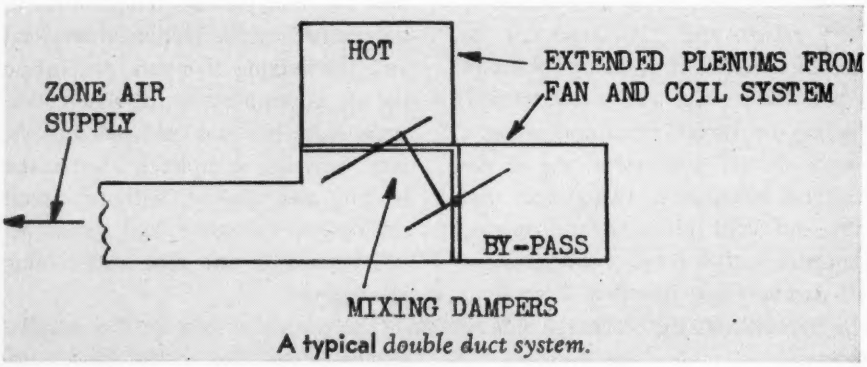
In other cases motor hum has required considerable cut and try to eliminate, and expansion and contraction noises, particularly in direct-fired equipment, may be impossible to correct short of replacement of the offending equipment. Air noises due to excessive or high air velocities or poor duct construction are closely related factors since the quality of duct construction limits the velocity that can be applied without objectionable noise and, conversely, if a particular velocity is required or selected, the duct construction must be good enough to deliver this air without objectionable noise.

Under the category of duct construction are two specific items worthy of separate mention: outlets and grilles and volume dampers. Outlets delivering supply air and grilles for return or exhaust air must be properly sized if air noises are to be kept within acceptable limits; most manufacturer's publish selection charts or tables whereby outlets and grilles can be selected to meet the exact application requirements. Volume dampers for balancing the air supply in ducts should, in general, be placed close to the fan end of the system and as far from the outlet or grille as possible due to air turbulence noises encountered if considerable throttling is necessary.

The selection of fans is a study in itself and far beyond any detailed analysis in this brief writing, but it is certain that every effort should be expended to select the fan within its proper operating range and within its tip speed limitations for the specific system in which the fan is to be used. Remember, it is desirable, in some instances, to consider the application of acoustical materials to critical locations in the system where objectionable noise may occur, such as noise that can be eliminated only by acoustical treatment or noise that may be more economically eliminated acoustically rather than by excessive oversizing of equipment or ductwork.

A third system, on which plans and specifications have just been completed, consists of a new heating and ventilating system for an existing auditorium which has been heated up to now by means of gas-steam radiators with a simple mechanical exhaust system for ventilation. The new system provides a mechanical ventilating system by means of tempered air supply through ducts in the truss spaces overhead and distributed into the areas through ceiling diffusers. Two zones are used, one over the balcony area and another over the main floor area. A separate zone for the balcony is provided since this area has a higher occupancy per cubic foot of space volume and, due to its elevation above the main floor, it is subject to some of the internal heat load dissipated into the area by the main floor occupants.

The existing underfloor exhaust ducts, passages and grilles were utilized as return and exhaust for the new system with connection to a separate exhaust fan in the equipment room. The exhaust fan is connected both to the supply fan inlet and the exhaust duct to the outside with motorized dampers to vary the proportion of return and fresh air in response to return air temperature. During warm-up and with minimum return air temperature the dampers will position to provide maximum return and minimum fresh air for rapid pick-up to room thermostat setting; as the internal load increases due to occupancy or warm-up, the return air temperature will rise thus reducing the proportion of return and increasing the proportion of fresh air up to 100% if the return air temperature becomes high enough.



A typical *double duct system.*

Control System

This arrangement permits the maintenance of good ventilation standards coincident with reasonable installed heating capacity and fuel cost. The stage and dressing rooms and, because of their independent function, the several connecting rooms and offices are heated with convectors supplied from the main boiler serving the tempering coils.

Control is by means of an electric three-way modulating valve in the tempering coil supply with control of this valve by zone thermostat and low limit. A separate coil and control circuit is used for each zone with no mixing dampers since the system does not include cooling and with only two zones, this arrangement is less complex. As with the other systems described, outdoor temperature reset is used, one system for the tempering coils and another for the convector circuit.

Better Service, more Sales

Youngren, starting in sheet Metal, has expanded into a successful oilheating Dealer

by
Bert Dunphy

"SELL THE BEST and service the rest" is the explanation that Leonard Youngren gives for the way he operates his sheet metal and oilheating dealership in Aurora, Ill. The statement reflects understandable pride in the line of equipment he handles and in his determination to render prompt, efficient service to any oilburner user who calls for it.

Youngren handles no fueloil and is not interested in adding it. When he sells an oilburning system he simply turns over the fueloil business to one of the local oil companies and has nothing more to do with that phase of the job. At the same time, he is not typical in his thinking about oilburner service.

Youngren is anxious to do oilburner service work and welcomes it as an opportunity to gain a satisfied customer whether or not he installed the equipment originally. He says that when an oilburner user calls for service there naturally is some cause for complaint. Rather than being annoyed at having to correct the fault or defect, Youngren looks upon these calls as a challenge and a real chance to make a customer happy and gain a booster.

This same thinking is reflected in his decision to handle the Timken wall flame rotary, for which Youngren became a franchised dealer in 1950. He reasoned that with a number of other dealers selling conventional oilburners they actually all were selling essentially the same equipment. The only differences between any of them could be price and service. He avoids price-cutting or shaving to get business, preferring to rely on the equipment to give him something different to merchandise. This, plus his concept of service as quite apart from the necessary evil that some dealers think it to be, enables Youngren to offer a little more on two counts.

None of his service customers is on contract, all telephoning whenever service is required. Each service call, including summer clean-ups, is billed on the basis of time and materials, $4.00 for the first half-hour and $4.00 for each additional hour. Minimum service call charges then are $6.00 for the first hour. There are six men in the service department, with dispatching handled by Henry Artlip. Each day a service log is prepared, listing calls as they are received, including the type of equipment involved, the name and address of the customer, time received, serviceman assigned, nature of complaint and a job number.

On a job ticket, with a corresponding number, details are written out for the serviceman and, when the call has been completed, he turns in the ticket. At the end of each day all service calls on the log for which a ticket has not been returned are placed on the top of next day's list so that each call is kept active until the serviceman's ticket indicates that it has been made.

The men are paid at the rate of $100 and $107 for a 5-day week and get $20 a day when they work on Saturdays or Sundays. Such assignments are apportioned on a rotation basis, and, in addition, a night man is on duty, receiving a premium of $2.50 for each service call he makes.

Work clothes are furnished for all of Youngren's men. In general, he explains, "I try to keep the men happy." Once every two months all are invited to an informal party held in the Leland Hotel, where food and refreshments are served. The gathering is not intended to be a school, but rather a periodic get-together. Out of such sessions and from a "Suggestion" box that the men are urged to use have come ideas that have been helpful in improving the efficiency of the organization. Notably, recommendations have been made for better arrangement of some of the shop facilities and a plan for putting work benches on hinges in crowded corners to permit them to be folded back against the wall when not in use.

Each applicant for a job fills in a complete form that gives his personal history, background and experience.

Additionally, the salesmen take an aptitude test, developed by Timken, before they are hired.

There are three men who work on sales, in addition to Youngren himself who does some selling, as needed. One of these, George Knight, is an old-timer in the industry, who was with Buckley & Scott in New England from 1924 to 1940, starting as a helper and advancing to the position of chief engineer. He joined Youngren about six months ago, after having taken the aptitude test with several other applicants and earning the highest rating.

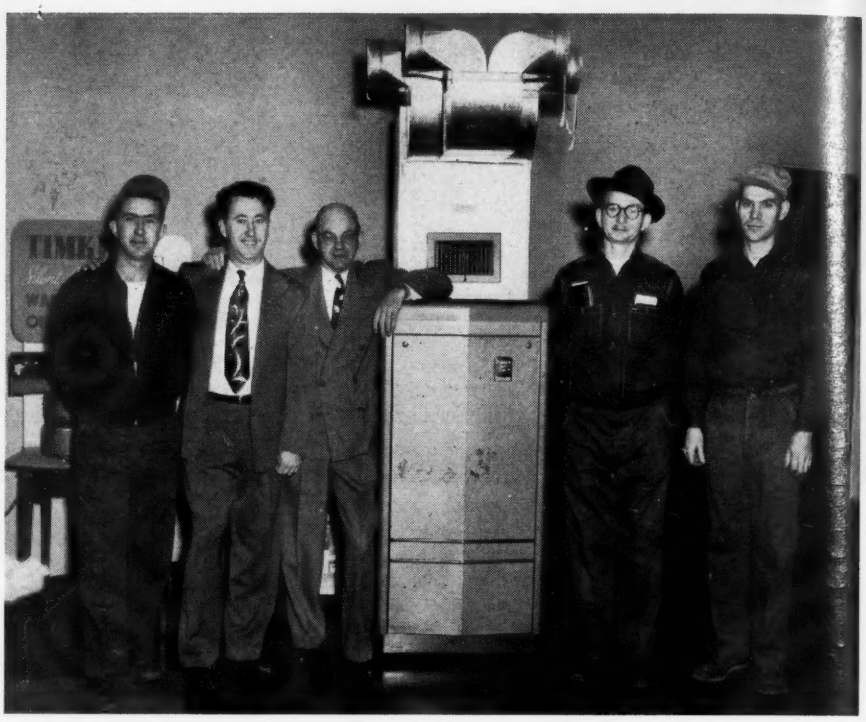
The salesmen work on a drawing account against commissions, are not assigned any specific territory, but are free to operate in any part of the area served by Youngren. This encompasses approximately a 15-mile radius around Aurora.

For each salesman there is maintained a separate card on which are entered his commission earnings, each one having his own colored card. Every sale is recorded to show the kind of equipment sold, the amount involved, the commission, the date of the contract and the date the commission is paid to the salesman.

Record Keeping

Another record that Youngren uses effectively is a prospect card that Timken has worked up for its dealers. It is made out in triplicate, one the master copy, the other for the salesman and the third for file. Besides recording the name and address of the prospect, other pertinent facts about the heating installations are filled in. On the back of the form space is provided for the salesman to keep track of the initial calls and follow-ups he makes.

In his sheet metal shop, too, Youngren recognizes the value of good record keeping and completes a job record sheet for every installation. On the sheet is shown, after the name and address of the purchaser, a description of the job, date started and date finished. A complete record also is maintained on the card of the number of workers used on the job, the time spent by days, quantity and kind of material used. This is more or less routine in the way of record keeping for sheet metal jobs, but Youngren adds on the back of the card space for the installation man or the foreman to fill in at the end of a day the material needed to complete the job and the estimated time it will take.



The brains *and some of the brawn that help make Youngren's tick. At the left is Ralph Nanninga, sheet metal foreman, who lays out the jobs and supervises installation; next is Leonard Youngren, owner of the business, with George Knight, one of his salesmen, standing alongside. To the right of the Timken furnace unit stands Henry Artlip, service manager and Joyce Bernson, sheet metal shop foreman.*

The value of this information, Youngren explains, comes when it is impossible to complete a job on a given day, but there is not sufficient work left undone to warrant the entire crew returning again. Then, too, if the work to be completed is not urgent or it is not imperative that it be finished immediately, completion can be deferred, which is helpful, particularly when the men are rushed.

Youngren's sheet metal shop is completely laid out and well equipped for efficient operation. On the day the shop was visited, with work in full swing, the floor and surroundings were as clean as they are in the accompanying picture. The place wasn't just tidied up for the camera.

With nearly all of the heating work involving warm air systems, and about 98% of it forced air, the sheet metal shop is kept constantly busy turning out ducts and fittings. All of these that are used are made in the shop, nearly all are the square type, with only a few of the jobs being put in with the newer, round, small pipe.

The four men in the shop, including Foreman Joyce Bernson, build up the stock of ducts and fittings during the slack season and replenish them as needed during the months when heating systems are being installed. In basement storage bins Youngren has room for storing upwards of 100 complete duct systems for the average size home. Along with these are kept such items as air filters, humidifiers, draft controls, burner controls and similar accessories.

Furnaces are kept here, too, with a chain hoist installed on the floor above to pull them up to be loaded on trucks.

The sheet metal work is laid out by Ralph Nanninga, who then supervises the work of eight sheet metal installers. In fact, Nanninga is in charge of all outside work.

The 24 employees of Youngren's are rounded out by the two who work in the office and one electrician. The electrician is not actually on his payroll, but Youngren has arranged with

the electrical contractor who employs him to assign the man full time to Youngren for whatever electrical work has to be done.

Sales promotion is rather extensively used by Youngren. This is spearheaded by a $5,000 advertising campaign, conducted cooperatively with Timken and utilizing newspapers, some local radio and theatre advertising. This last consists of a spot color film that is shown every other week. The one detail that has been lacking in this program is direct mail, and Youngren is now actively working up a set of mailings that will overcome this deficiency.

Located as he is in a small town, Youngren points out that he profits greatly by "word-of-mouth" advertising. Which, he continues, is another reason why he strives so diligently to render prompt, satisfactory service, knowing that the good will he thus builds up can be relied upon to benefit him at some later date.

The first year Youngren handled Timken burners he led the state, outside of the Chicago area, and he repeated last year, making him eligible for cruises to Bermuda and on the Great Lakes. This year his total sales will reach $300,000. Oilburner sales will approximate 350, with about 250 of these conversion oilburners, practically all of the others used with warm air furnaces. On new home work, Youngren has working arrangements with about 26 contractors, who average four to five homes each per year. These are mostly 5-room houses, and the installation of ducts normally consumes about one 8-hour day.

To complete the equipment inventory, Youngren operates seven trucks, two by servicemen enrolled in the steamfitters' union; two by servicemen, the others use their own cars; three on sheet metal work. Each fitter carries a portable electric pipe cutter and threader, as part of his regular equipment.

Youngren's started in the 30's as a sheet metal shop, at which time Lennie worked for his brother who operated the company. In 1942 he took control upon his brother's death, but shortly after was assigned to Pearl Harbor as a sheet metal instructor and remained there until the end of the war. When he returned he re-opened his sheet metal business.

In 1946, Youngren moved to his present location, 211 Illinois Ave., Aurora, in a newly-erected building, incorporating general offices, display space, sheet metal shop, service dispatcher's office and basement storage facilities.

A look at Youngren's organization reveals an energetic owner who has built up his business largely because he has been conscientious in serving his customers. He has recognized the value of having something a little different to sell and realizes that the more friends he makes among the oilburner users he services, the more business he can expect from them and from their friends.

Youngren is now looking to expand, perhaps with a showroom located more centrally in Aurora, with facilities where customers can pay their bills. He has arrived at this position not only because of the personal interest he exhibits in the business, but because he has paid strict attention to his costs and all in all has almost automatically done what every oilheating dealer should do to be successful.

Interior *of Youngren's sheet metal shop. Here all heating ducts and fittings are fabricated. In the basement below the finished products are stored, the stock being built up during the slack season and replenished as needed during the months when heating installations are made.*

❖

Texas Jobbers and Educators sponsor management Session

THE MEETING of members of the Texas Oil Jobbers Association with educators on the University of Texas campus, October 21 to 23, in what was the First Annual Management Institute, sponsored jointly by the Texas Association and the University of Texas, was highly praised by L. T. White, manager, business research and education for Cities Service Petroleum, Inc., during his keynote address before the group. The management institute is believed to be the first of its kind held.

White in his address, brought out the fact that these are trying times for small businesses. Though geographic frontiers are almost extinct, economic ones are still wide open for new marketing and production methods. White continued by stating that "management is the immediate problem. Hope lies in better management. It has been said by one management executive that management must have the charm of a diplomat, the persistence of a termite, the shell of a turtle and the strength of a horse."

"Shut-down" Smoke

The Problem and how the "Coasting Hub" eliminates it in gun type Oilburners

by
C. A. Hathaway*

IN THE PAST FEW YEARS those companies engaged in the manufacture and application of domestic gun type oilburners or accessories have been taking increasing interest in the transient combustion conditions which occur coincident with the stopping or starting of the burner. There is very good reason for this interest since these conditions account directly for a great number of the complaints concerning "sooting" and shut-down rumble.

Great progress has been made in the oilburner industry in recent years in the improvement of steady-state combustion conditions. The development of the Shell combustion head led the way for the development of any number of high performing combustion heads which will allow near ideal combustion. However, these contributions do not completely solve the two problems mentioned above.

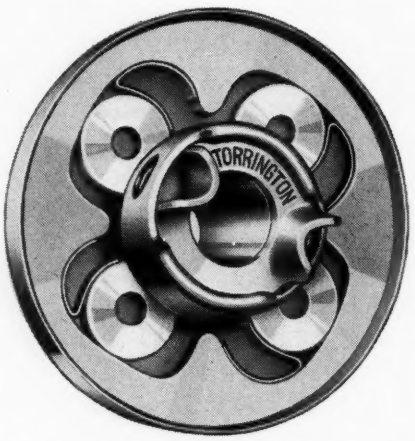
It was found that nearly all of the remaining unsatisfactory combustion conditions can be attributed to poor combustion during the few seconds in which the rotor is coasting to a stop. The transient conditions at the start are not conducive to ideal combustion, of course, but they are not nearly so critical as the stopping conditions for the following reasons:

1. Upon starting, the air supply rate builds up faster than does the oil supply thus providing an excess of air at the very start.

2. The duration of the transient starting condition is much shorter than that during the shut-down due to the high starting torque of oilburner motors.

3. At the start, the fire is in the process of heating up which provides a much better opportunity for the relatively small soot deposit to burn off during the running period.

A prominent authority on domestic oilburners estimates that less than 10% of the smoke or soot is generated at the start as compared with 90% at shut-down (for a clean fire in steady state.) He further estimates that domestic fueloil bills can be reduced by as much as 5% to 8% by the improvement of shut-down characteristics alone.



Torrington *Mfg. Company's "Coasting Hub," with the outer cover removed to reveal the free-wheeling mechanism. Shown are four circular rollers held in place by springs against the cam plate.*

Based upon the above analysis it was felt that a significant improvement in shut down combustion characteristics would be a tremendous contribution to the oilburner industry.

It can be shown that the rate of decay of airflow is much faster than that of oil flow during the period after power is cut and before the pump cut-off is actuated. Obviously, this results in insufficient air and a smoky fire during shut-down. The problem is, then, to provide some means for maintaining a high rate of air flow for a period of a few seconds after power is cut. This time period is very short but it must be remembered that there is only a very small amount of oil to be burned clean after shut-down.

The so-called coasting hub effectively eliminates shut-down smoke and shudder by allowing the blower wheel to become disengaged from the motor shaft upon shut-down and spin freely on its own axis by reason of its high rotational inertia—the pump effectively braking the motor armature and pump rotor. This is accomplished by the application of a device known variously as a free wheeling, roll, or unidirectional clutch.

The clutch consists of four rolls, each leaf-spring loaded and in contact with a cam plate and central spindle. The action is such that the motor output is transmitted positively by wedging the rolls between the cam plate and spindle when the blower wheel is to be driven. When power to the motor is cut and the pump load starts pulling the motor speed down, the inertia of the blower wheel causes the rolls to become disengaged and allows the blower wheel to over-ride or continue to rotate at a speed faster than that of the motor shaft.

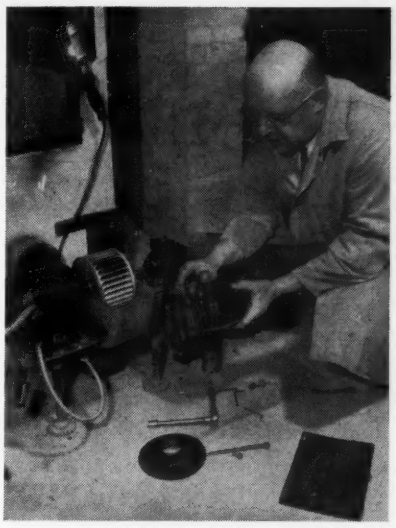
A typical case History

The fundamental principle described above has been extensively investigated and it has been proven beyond the shadow of doubt that such a coasting hub will provide clean, quiet shut-downs. It might be further emphasized that such satisfactory results can be demonstrated for any installation which can be considered normal. A typical case history is described below:

"The coasting hub device was installed in a burner having a 1.2 gph nozzle, no solenoid or other auxiliary means of stopping oil flow, and with the pump pressure set at 100 lbs. The first test was made with the wheel hub taped so that it could not coast. The burner was started, allowed to run 2 or 3 minutes, then the power was cut. At this time the flame was observed through a port in the face of the boiler opposite the burner, and it appeared to flutter and die slowly, accompanied by miniature explosions of small globules of oil and considerable smoke. The smoke was observed through a port in the stack as well as that in the furnace wall.

"When the tape was removed so the

*Laboratory Director. The Torrington Mfg. Co., Torrington, Conn.



Joseph Sugerak, *veteran engineer in Torrington's Air Impeller Division, is shown in the process of installing a "Coasting Hub" blower wheel. He holds the original wheel, showing the shorter coupling required in some instances when the replacement is made.*

Sugerak reports also on two specific installations where improved operation was achieved when a "Coasting Hub" blower wheel was used. In the Litchfield, Conn. home of S. R. Fuller such a change was made on April 11, 1951, after complaints of excessive soot generation and oilburner shudder. Sugerak inspected the job almost a year later, on February 1, 1952, and found the furnace interior "very clean," with fly ash, ultimate end-product of complete oil combustion, the only deposit noted. Oil odors which previously had been detected also were found to have been eliminated.

Similarly, when a "Coasting Hub" blower wheel was installed on the oilburner in the residence of Torrington President S. W. Farnsworth improvement resulted. The change-over was made on October 26, 1951, when the furnace was vacuum cleaned, and upon inspection in February this year the wire brush marks left on the furnace wall by the previous Fall's cleaning still were visible, graphically demonstrating clean combustion.

Inspections of other "Coasting Hub" equipped burners uncovered similarly satisfactory results, with users reporting that no vacuum cleaning had been required.

hub could resume its 'free wheeling' characteristics, the flame at the stop was considerably more uniform than previously noted; there were no explosions, and no smoke was observed. The fire winked out in approximately one second after power to the motor was cut, and the wheel coasted 9 seconds after that, making a total coasting time of 10 seconds."

The biggest problem confronting the engineers who developed this product was the determination of the coasting time required to adequately cover all normal installations. In actuality a high rotational speed need be maintained for a period of only about one second after the power is cut since the critical period during "stopping" is that time between the cessation of power to the motor and the actuation of the pump cut-off, an interval of no more than one second for pumps in reasonably good condition.

Testing of various wheel sizes at various combustion rates, the following scale of acceptability was established:

Wheel Size	*Coasting Time (Seconds)*
6-5/16" Diameter	7
5¼" Diameter	6
4¾" Diameter	5

Regarding the question of endurance, it will suffice to say that the Underwriter's Laboratories have approved the product after an accelerated test consisting of 100,000 cycles of operation. Actually, the manufacturer has conducted tests of much longer duration as well as extensive field tests all with wholly satisfactory results.

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Oilheating Ideas to feature Eleventh Heating Exposition

MANY NEW IDEAS for use by the oilheating trade are to feature the exhibits at the 11th International Heating and Ventilating Exposition, to take place at the International Amphitheatre in Chicago, January 26 to 30. The Exposition will be under the auspices of and held concurrently with the 59th annual meeting of the American Society of Heating and Ventilating Engineers at the Conrad Hilton Hotel.

With nearly 400 exhibits reserved, the Exposition will occupy all available space in the airconditioned Amphitheatre, plus the second floor, with many of the exhibits featuring displays of time-saving and money making equipment for installation and maintenance work. The Society's own exhibit will be centrally-located, highlighting some of its latest research projects, including one that illustrates how to make actual measurements of the reactions of human beings to sudden temperature and humidity changes, which is valuable in working out equipment design problems.

One exhibitor among the many who are planning to show lines of oilburning units will display a low pressure oilburner with a 2-stage, self-purging fuel pumping unit. This has two pumping elements operating in conjunction with a purging reservoir and pressure chamber, with a metering piston actuated by oil pressure without mechanical linkage through a feed range of ½ to 4 gph.

Still another prominent manufacturer will show dual-fuel burners for commercial, industrial and residential installations and a third is to present a line of high capacity furnace units developing from 330,000 to 1,000,000 Btu. Continuing with the larger sizes of equipment, there is to be shown for the first time a newly developed air-atomizing oilburner, designed for packaged power boilers. To achieve effective air control, only about 1% of the total air required for combustion at full load is admitted with the air for atomization and the burner is described as producing full efficiency from full load down to partial load and using fueloils from light through the Bunker C grades.

In addition to these few, other exhibitors will show complete lines of conventional conversion oilburners, boiler and furnace-burner units, with a number of accessory oilburner manufacturers participating, as well.

Small ducts for warm air distribution will be prominently displayed, developed by furnace manufacturers and concerns specializing in sheet metal fabrication. The complete roster of products to be displayed includes such diversified equipment as unit and self-contained airconditioners, fans, heating and cooling coils, radiation, unit heaters, steam and hot water heating specialties and ventilators.

Sinclair adds Tanker to its growing Fleet

ON FRIDAY, November 7, the Sinclair Oil Corporation added another tanker to its fleet. This brings the total of Sinclair owned tankers to eleven ocean-going ships in addition to the ocean tankers now chartered by the company.

The new ship christened the "P. C. Spencer" after Sinclair's president, was sponsored by his wife. Within nine minutes after launching, the keel was laid for a second tanker to be named the "M. L. Gosney" after the executive vice-president of Sinclair.

Under graying skies the 25,000 deadweight ton tanker slid gracefully down the ways to take her place in ocean going service. Approximately 604 feet long with a 78 foot beam and 44 foot depth, it will draw 33 feet of water when fully loaded with 175,000 barrels of crude oil or 200,000 barrels of gasoline. It carries a crew of 44 with accommodations for 54. Each member of the crew has a private room. Driven by a high pressure, steam-geared turbine that can develop 13,750 shaft horsepower, the tanker is designed for a speed of 18 knots.

The "P. C. Spencer" took about seven months to build from keel laying in March to the launching this month. An additional two months will be required to fit it out.

The ship, whose home port will be New York, will be used in the coastwise and Caribbean trade as a crude oil carrier. It is also available for carrying refined petroleum products. Ports served will be Puerto La Cruz, Venezuela, Corpus Christi and Houston, Texas and Marcus Hook, Pa.

Guests attending the launching met at the Sheraton-Belvedere Hotel in Baltimore. From here a cavalcade of 40 limousines transported them to the Sparrows Point Yard of the Bethlehem Steel Company, builders of the ship. After the launching, the entire party was returned to the hotel where a reception and luncheon was held.

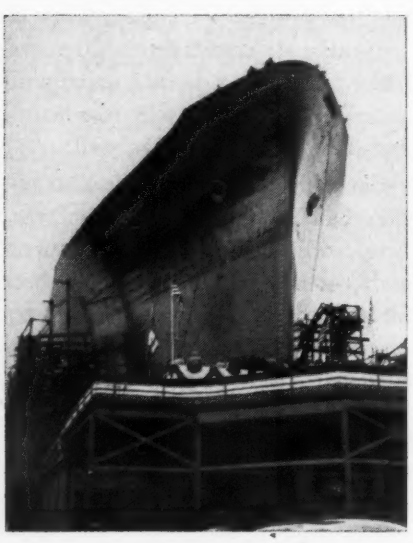
P. C. Spencer Introduced

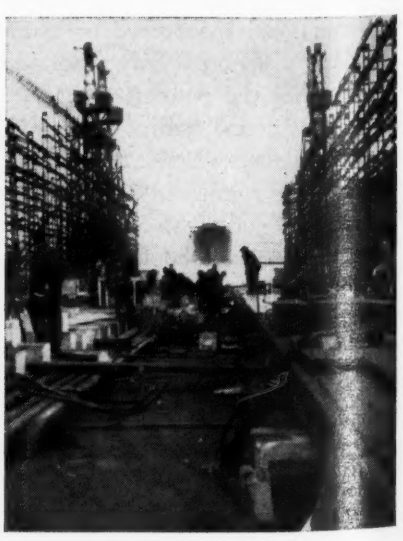
J. M. Willis, General Manager, Baltimore District, Bethlehem Shipbuilding Division, introduced P. C. Spencer, president of the Sinclair Oil Corporation, who was the principal speaker. Spencer has been president of the Sinclair Oil Corporation since 1949, at which time he succeeded Harry F. Sinclair, founder of the company, and has been associated with the Sinclair Company for about 18 years. This dates back to 1934 when the Producers and Refiners Corporation, of which he was general counsel, was bought by Sinclair. In 1946 he was made general counsel of the corporation. By 1947, he was elected president of the Sinclair Refining Company and became executive vice-president of the parent company in 1948. The Sinclair Refining Company is the principal operating subsidiary of Sinclair Oil Corporation.

In his address Spencer showed how the economic restrictions on the individual were slowly lifted through the centuries and opportunities to develop were undertaken in spite of the hardships and risks, by groups of rugged individualists who banded themselves together into companies of merchant adventurers and planters. These were the original stock companies and were the predecessors of our modern corporations.

According to Mr. Spencer, it was: "Through the medium of this new economic device called the joint stock company, that the necessary capital and the necessary management and the necessary labor were assembled, and bands of men and women set out in little ships for the new world. No one was here to monopolize the hewing down of great forests to make farm lands. As more and more of these ships shuttled to our shores,—and history tells us they came here in incredible numbers after 1620,—it followed naturally that a man who wanted to make shoes was free to do so.

It was a new phonomenon in history. For the first time man was really free,—religiously, politically and economically. And it unleashed creative energies beyond calculation. As you well know, out of these incentives and impulses the richest and most powerful nation has been builded in a relatively short space of time. And the end is not in sight if we can but keep our freedoms."





API annual Meeting looks to increased Production and Use

PLAYING HOST to a record-breaking number of registrants the American Petroleum Institute held its 32d annual meeting in Chicago at the Conrad Hilton Hotel, November 10 to 13. Registration totaled approximately 6,400, reaching an all-time peak for an Institute annual meeting.

Business and general sessions, committee meetings and informal groups occupied themselves during the gathering with a review of oil industry accomplishments, predictions of increased and ample production, larger consumption of products at all levels and an optimistically cautious prediction of business activity during the coming year.

L. S. Westcoat, president, The Pure Oil Co., Chicago, and Frank M. Porter, president, Fain-Porter Drilling Co., Oklahoma City, were re-elected chairman of the board and president, respectively, and the following vice-presidents were named for the Divisions indicated: Marketing, Robert M. Bartlett, Gulf Oil Corp.; Transportation, P. C. Spencer, Sinclair Oil Corp.; Production, John G. Pew, Sun Oil Co.; Refining, John G. Newton, Magnolia Petroleum Co. B. Brewster Jennings, Socony-Vacuum Oil Co., was re-elected treasurer and Lacey Walker was renamed secretary and assistant treasurer.

Secretary of the Interior Oscar L. Chapman was principal speaker at a general session held on November 12, during which he cited the record of the domestic oil industry in meeting civilian and military needs as "almost unbelievable." Complimenting the overflow crowd for the accomplishment of the oil industry in achieving tremendous expansion in the face of a shortage of materials, Chapman pointed out that as Petroleum Administrator for Defense he has had an opportunity to work closely with the industry and was in a position to testify to the alacrity with which American industry as a whole responded to the demands imposed upon the nation at the time of the outbreak of the Korean war. "Your own industry," he continued, "has been outstanding in this regard. The petroleum industry, instead of trimming its sails, had gone steadily ahead after World War II, using a 1944 high production of 4,864,000 barrels a day as only a point of departure for constantly higher production."

The oil industry had maintained its cooperation with the government, Chapman recalled, ever since the end of World War II and, in the face of the mobilization program which the country now is undertaking, faces a three-part job. It must insure that there is enough oil to meet all vital military needs everywhere in the free world; it must insure that there will be enough oil for all essential civilian needs and that there will be enough available to meet demands of warfare if there should be another war.

"Time and time again you have rallied to help your government solve supply problems of tremendous magnitude," Chapman told the oil men, "and I know that you will give my successor the same unselfish, unstinting assistance you have given me."

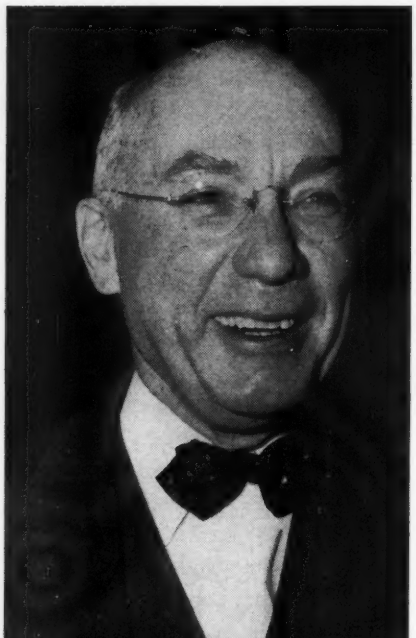
A group session of the Division of Marketing on November 10 heard Dr. Courtney C. Brown, a director of Esso Standard Oil Co., sound a note of caution regarding the general outlook for the petroleum industry. This he stressed was not in the nature of a forecast, but merely an attempt to call attention to some of the potential problems the industry faces. He surmised there might be ups and downs in the road ahead, "but it need not be too rough a road as long as this great industry remains free to select its own road, and as long as it continues to exercise the same kind of foresight and courage that has come to be identified with it over the years."

Summarizing, he cited four principal features of the present situation as suggesting "some caution":

1. The industry's huge postwar expansion program has been geared to an unprecedented rate of demand increase. The expansion is unabated on the premise that demands will continue to register similar increases, but "some of the data do not provide convincing evidence that this will be the case."

2. Declaring that, notwithstanding the Iranian situation and the petroleum

Chairman *and speakers at the Marketing Division Group Session, November 10. Left to right: Harry J. Kennedy, Continental Oil Co., chairman; Admiral Ben Moreell, Jones and Laughlin Steel Corp.; Dr. Courtney C. Brown, Esso Standard Oil Co. and Otis H. Ellis, National Oil Jobbers Council.*



R. M. Bartlett, *Gulf Oil Corp., newly elected API vice-president for marketing, and designated chairman of the general marketing committee.*

strike, oil products, except aviation gasoline, are in good supply, Dr. Brown declared that "It is probably reasonable to say that the present situation would not be as firm as it is if these two events had not occurred."

3. Demand for petroleum seemingly is becoming more sensitive to general business change, he continued, recalling that "there was a time when the petroleum industry did not have to concern itself with the business cycle to the same extent as some other lines of endeavor" because gasoline once was the only primary petroleum product. Mentioning such developments as a leveling-off of European industrial production and of United States defense mobilization by mid-1953, Dr. Brown stated, "Certainly there is enough evidence accumulating to justify a note of caution about the general business outlook."

4. Finally, although industry operations are adjusted for changing seasonal situations, the possibility exists that next Spring the situation will be such that a considerable decrease in the level of operations may be necessary. "Some are estimating," he added, "that next Summer's average demand may be as much as 800,000 barrels per day below the current winter's, and summer inventory buildup will offset this decline only in part."

Otis H. Ellis, general counsel of the National Oil Jobbers Council, Washington, was the second speaker at the Marketing session. In a talk entitled "Shall it be Individualism or Nationalism," Ellis declared that the jobber sees two threats to his independence, "The first, and foremost in his eyes, is the threat of the integrated companies within the industry, and the second is big government." The jobber, he said, has been so concerned with his feeling of instability and the uncertainty of his future that he has limited his defensive actions in preserving his independence to battling with his supplier and his competition.

To present a solid front in the preservation of individualism, Ellis continued, the industry must preserve the place of the independent by eliminating this feeling. Calling for new approaches, new understandings and a continuous brand of industry statesmanship, Ellis outlined a plan approved by the NOJC that designates next February as "Consult your supplier month," during which state associations affiliated with the Council are to be urged to recommend that their members meet with their suppliers to discuss problems. The plan is designed to operate on an individual basis with each jobber personally consulting with his supplier in correspondence and verbally to thrash out mutual problems.

Unity required

"It might be argued," he continued, "that the making of peace between the petroleum jobber and his supplier is a far cry from preserving individualism and defeating nationalism in this country. While this may be true, it cannot be denied that it might prove as a bulwark against nationalization of this particular industry." And, Ellis said, if the methods to achieve unity were emulated by other industries, then it possibly could spread and achieve some results of national significance.

The pendulum has swung from employer domination of labor to labor domination of the employer during the past 20 years, Ellis concluded, and any reversal of this trend must be brought about by the rank-and-file small business man, assisted by the big businessman.

Marketing Committee

The following day, November 11, the Division of Marketing named 70 elective members of its General Committee, including A. T. Atwill, Quaker Mfg. Co., Chicago; Thomas A. Brown, Empire State Petroleum Association and Sentinel Oil Co., New Rochelle, N. Y.; W. C. Burns, Hartol Petroleum Corp., New York; T. A. Crawford, Oil-Heat Institute of America and Timken Silent Automatic Div., Jackson, Mich.; Horace Davenport, George Pickering Co., Salem, Mass.; John Harper, Harper Oil Co., Long Island City, N. Y.; Henry L. Schwartz, Paragon Oil Co., Brooklyn, N. Y.; John R. Sherwood, Sherwood Bros., Inc., Baltimore, Md.; H. B. VanCleve, Maritime Petroleum Co., New York and Maurice Vining, Diesel Oil Sales Co., Seattle.

R. M. Bartlett, Gulf Oil Corp. and newly elected API vice-president for marketing, was named chairman of the General marketing Committee; John Harper, Harper Oil Co., is vice-chairman and E. F. Wells, Ashland Oil Refining Co., is secretary.

The Program Committee of the Division of Marketing for 1953 consists of: J. G. Jordan, Shell Oil Co., chairman; Dwight F. Benton, Standard Oil Co. (Ind.); J. F. Cummins, Cumberland Oil Co.; W. G. King, Richfield Oil of California; H. B. VanCleve, Maritime Petroleum Co. and Frank A. Watts, Humble Oil and Refining Co.

President Frank M. Porter appointed five members of the API board of directors to the marketing general committee: Wiley H. Butler, Coastal Oil Co.; W. H. Garbade, Deep Rock Oil Corp.; R. L. Kent, Kent Oil Co.; B. L. Majewski, Great American Oil Co. and W. K. Warren, Warren Petroleum Corp.

R. M. Bartlett, Gulf Oil Corp., presided over a meeting of the Institute's jobber-supplier committee on November 11, with the greater portion of the meeting devoted to a discussion of assistance to jobbers within the legal framework as defined by the purposes of the committee. The General Mar-

keting Committee also launched plans to have a similar committee on dealer-supplier relations established by the time of the Division's Spring meeting in Dallas.

J. L. Minner, Shell Oil Co., reported on the progress made by the Fueloil Subcommittee in the study being conducted on fueloil storage of local marketers. The agenda for this work, he explained, calls for a study of the subject from the supplier's and the marketer's viewpoint, covering such specific topics as how much additional storage capacity the marketer is justified in building to improve his supply position and increase profits, average cost for a marketer to add to his storage and whether the marketers have increased storage capacity during the past five years in proportion to their increases in gallonage sold. Minner indicated that the complete report would be presented at the Dallas meeting of the Division next Spring.

Another activity of the Division of Marketing was the presentation of API Certificates of Appreciation to Harry J. Kennedy, Continental Oil Co., retiring chairman; E. J. McClanahan, Standard Oil Co. of California and A. A. Stambaugh, The Standard Oil Co. (Ohio).

Future oil Demands

A significant paper on "Meeting future petroleum Demands" was presented by John E. Swearingen and John W. Boatwright, both Standard Oil Co. (Ind.), which concluded that the oil industry can supply sufficient quantities of oil to meet all needs of the United States for the foreseeable future. Swearingen's prediction, covering the years from 1952 through 1967, indicated that for the next 15 years "We shall be finding oil faster than we shall be using it." By 1967 he said the industry should be producing about 8 million barrels of crude and 1,100,000 barrels of natural gas liquids per day, an increase of about 33% per day over present levels.

Also, the oil industry's productive capacity will show large increases, boosting the present reserve producing capacity of about 900 thousand barrels a day to about 1,900 barrels per day in 1967, adding that "Our forecast indicates that by the end of 1967, cumulative crude oil discoveries should reach 120 billion barrels, with proved reserves standing at 38 billion barrels, about 13 times the current rate of production."

Boatwright forecast a 46% gain in the total domestic demand for petroleum products by 1967, from 7,043,000 barrels to 10,280,000 barrels daily. "The industry alone cannot insure accomplishment of these objectives," he said. "If the American people will create an environment characterized by monetary stability, free prices, intelligent labor relationships and a sound highway development program, this industry will supply the petroleum needed to meet full requirements."

Boatwright concluded "We feel confident that the future supply of crude oil and natural gas liquids will be adequate to meet the needs of a greatly expanded market."

The Oil Industry Information Committee presented its record of accomplishment on November 10, with E. W. Esmay, acting executive director, reporting that the "grass roots" information program conducted since 1947 has made great strides in providing the American people with a better understanding of the domestic oil industry. He disclosed that more than 20,000 oil men now are serving voluntarily on more than 5,000 committees throughout the country, using all types of media and forums to help people understand the true picture of the industry, its operations and the role that competition plays in oil progress.

John W. Boatwright, *Standard Oil Co. (Ind.), who collaborated in the presentation of a paper on "Meeting future petroleum Demands" at the Division of Refining Group Session on November 10.*

OIIC Program to continue

Continuation of the OIIC program through 1953 was approved by the API board of directors, with the establishment of a $2,900,000 budget, an increase of about 7% over 1952. The 1953 campaign will follow the pattern already established, with all projects now under way to be expanded or intensified, according to Charles Z. Hardwick, The Ohio Oil Co., national chairman for 1952 and Stanton K. Smith, Smith Oil and Refining Co., chairman-elect for 1953.

The OIIC farm program again is built around a basic booklet, pointing out the mutual interests of the oil and farm industries. The education and youth program has as its goal for the 1952-53 school year reaching one million students and the woman's activities program once more will feature the theme "Oil in a woman's World." Particular attention next year is to be paid to reaching intra-industry audiences, and advertising in national media with mass circulation will continue, following closely the highly successful pattern adopted in 1952. This latter phase also will include material designed for local community advertising.

The 1953 and 1954 meetings of the API again are scheduled for Chicago; the 1955 meeting will be held in San Francisco. Specific dates are: November 9 to 12, 1953; November 8 to 11, 1954 and November 14 to 17, 1955.

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Millard E. Stone has been appointed director of industrial relations, Sinclair Oil Corp., New York 20, N. Y. and its subsidiaries. Stone for the past ten years has been director of industrial relations, Bendix Products Div., Bendix Aviation Corp. Prior to that, he was director of personnel for the Electric Auto-Lite Co.

Objections overruled!

Because They show why the Prospect won't buy, They're the Salesman's "best Friend"

by

William Sheppard

MY SALES MANAGER, Pat Stryker, was hunched over his desk adding up the tally on the sales contest he was running to push the new burner we had just taken on. I slid an order for one across the desk to him. I didn't think he'd mind the interruption.

"'Bout time," he grunted and added my sale to the not-so-heavy total opposite my name. "How many appointments did you have last night?"

"Two," I said.

"Where's the other order?"

"Pat, it's the darndest thing. On my first stop the fellow and his wife were as nice as could be. They didn't argue about anything. Didn't have any objections, it seemed, to having a new oil-burner put in. Yet when I was all done, they didn't buy. And I couldn't make them. On the other hand, at my second call I had a real go-round. Fellow threw objections at me right and left. I thought I didn't have a chance. But that's where I got the order."

Objections help Sell

"Sure you did," Pat nodded, ran his hand across his freckled bald head and then leaned his better than 200 pounds forward on the desk toward me, "The guy who was objecting wanted you to sell him. He just wanted a nice fight out of it and he wanted to be sure that you could show him that your deal was a good one. That other fellow took it easy with you because he knew he wasn't going to buy. And you didn't change his mind, either!"

"But Pat," I said, "is selling just winning a lot of arguments?"

"Not arguments, son! Not arguments!" Pat slapped his bald head the way he always did when he was wrought up. "Salesmen don't win arguments. They just make sales."

He got to his feet and started pacing up and down. I leaned back in my chair, knowing that I was about to get hit with another lesson from the master.

"Look," he said. "Objections are as much a part of selling as waves are to a yachtsman. They may not always be there but they usually are and he handles his boat accordingly. A salesman, you—if I may be so bold as to call you that—want objections. You should do your best to smoke them out because you want the tip-off on what's keeping the sale from coming through. When Mr. Prospect starts objecting, you, Mr. Salesman, start working. But you don't argue. You don't act like the objection is silly, even if it is. And you can bet that you don't ignore it."

Look at Objections

Pat sat himself down on the corner of his desk and continued in a quieter tone. "Let's look at objections. Mr. Prospect, it seems to me, can only have about six kinds. One, he doesn't need the burner. Two, he doesn't have the money. Three, your price is too high. Four, he doesn't want your make of burner. Five, he doesn't have confidence in your company. And six, everything's all right but he doesn't want it *now*.

"Son, does anything in that list slow you up? Haven't you got the answers for all of 'em? And shouldn't you get down on your knees and thank Mr. Prospect for telling you where to hit him the hardest? One thing, though, he shouldn't be allowed to bring up objection number six that I just mentioned; if you've done a real selling job, he'll be asking you how soon your men can get to him, not something about you calling back in the Spring."

Pat walked over and put his finger on my name on the sales contest chart hanging on the wall. My John Hancock was a good distance from the top.

"Your name will go up higher here," he said to me, "if you treat objections as invitations to get the order. And the best way to handle an objection is to twist it around into a reason to buy. For instance, suppose Mr. Prospect says he doesn't need a new burner. That sets it up for you because that's when you give him your nice confident and sincere smile and tell him that you're sure that his old burner is putting out enough heat. You can tell, you say, that he's the type of homeowner that you know wouldn't allow his home to be rundown or uncomfortable. It's for that very reason that you came to him to show how much better a job this new burner will do and at a real saving. Too many people, you say, fail to keep up their homes like he does. Too many people fail to have the intelligence to realize when it is the wise time to make a change. Then you, with the perfect opportunity, can go into all the fine features of this burner."

"Sounds good the way you tell it, Pat," I said.

"I didn't get this job by marrying the boss's daughter," he replied with a smile that showed his gleaming gold tooth which replaced the molar that he lost at football years ago. "Now suppose he says that your price is too high. You tell him: 'Mr. Prospect, I'm glad you brought that up. While the price for all this equiqment and labor isn't a bit too high, it does cover the cost of top materials and workmanship and design so that you'll get such satisfactory long-term performance that you can put the money saved into your favorite hobby or a vacation trip you've been looking forward to—and not have your plans disrupted by a lot of repair bills."

Stress repair Bills

"That angle about repair bills will go fine," Pat continued, "if he says he hasn't got the money. And then you can show him—as though he had invited you to—how little the monthly payments for all this are.

"Suppose he tells you that he doesn't know much about this burner. Fine. You thank him for mentioning the burner because you want to show him some facts and figures about what the burner has done and will do. If he shows lack of confidence in our company that too gives you the chance to talk about us and give him a list of

(*Please turn to page* 142)

Oilheating public Relations

WINNING ENTRIES FOR THE FINAL TWO QUESTIONS OF THE 1952 PRIZE CONTEST

Question: Where is the oilheating industry weakest in public relations?
Question: What fueloil credit program is best for low income families?

COMPLETING the publication of winning replies to the ten questions which contestants were asked to answer in FUELOIL & OIL HEAT'S 1952 Prize Contest, are the following responses to the last two questions which are reproduced above.

First prize winners are shown for both, followed by one "Honorable Mention" for each, the latter being paid regular space rates for their efforts, the former representing the recipients of $100 awards. Prize winners, including runner-ups for the other eight questions were published in the October and November issues.

Oilheating public Relations

Winner: MRS. LILLIAN WELLEN

YOUR INTERESTS FLOURISH when dealings between you and other human beings go smoothly. Good public relations is the oil that reduces friction. The oilheating industry needs to lubricate where the friction is greatest—at the community level. So, your public relations program get rolling when it begins at home: with employees.

To your customers and to the public as a whole, those who work for your company are your company. Naturally, you want outsiders to look upon your company as friendly, helpful, thoughtful—as a good place to do business. And your company's representatives are friendly, helpful, thoughtful when they, in turn, think of your company as a good place to work.

But good relations with employees depends on more than the heft of the green stuff in the pay envelope. Fair play counts just as much as fair pay. And that leads us to your first check list:

☐ 1. Place conveniently a bulletin board for news, clippings, snapshots, announcements.

☐ 2. Have a "suggestion box" or some other means for airing constructive criticism.

☐ 3. Call metings to announce, inform, discuss new prices, methods, policies. Information leads to understanding, understanding to confidence, confidence to morale, morale to productivity.

☐ 4. Put the right people in the right jobs.

☐ 5. Let the right hand know what the left hand is doing: keep all departments abreast of each other and smoothly functioning together. Increased efficiency reduces expenses as well as "office politics."

☐ 6. Supply the right tools and the right working conditions.

☐ 7. Give opportunity, incentive, recognition. A sense of meaningful participation is a basic human need.

You know that when customers like a firm the job of selling fueloil, oilburners and service is more than half done. That brings us to your check list for getting along with your customers:

☐ 1. Make it easy for the customer to buy from you. (We offer a budget plan for allowing customers to spread the cost of fueloil used in the heating season over 10-months.)

☐ 2. Be reliable. Give dependable service, competent workmanship. With a good reputation you draw new customers, keep old ones.

☐ 3. Be courteous and cheerful in all contacts—from the switchboard to the collection, all along the line.

☐ 4. Invite your customers to offer suggestions for improving your operation.

☐ 5. Satisfy the customer. Think of the customer as more than just a buyer of fueloil and oilburners: help him derive satisfaction from his purchases.

☐ 6. When the customer is entitled to an adjustment give it promptly, willingly, smilingly. The longer a customer broods over what he thinks is an injustice the more likely he is to pass his anger on to other people. Fair adjustments turn complaints into assets.

You're a good businessman as well as a good citizen when your company takes part in civic activities. That's because of the immense good will you build up. So, here's your third check list:

☐ 1. Have executives and employees take an active interest in the local service clubs.

☐ 2. Invite special groups to visit your plant, groups such as teacher-led school children.

☐ 3. Keep your trucks shining, keep the appearance of your plant and the surroundings pleasing to the eye. Neatness also lessens fire hazard.

☐ 4. Control smoke and waste disposal. Griming a housewife's wash doesn't endear you!

☐ 5. Encourage employee recreational projects such as baseball and bowling teams.

☐ 6. Take part in worthwhile community fund-raising campaigns, blood donor drives, etc.

☐ 7. Be the moving spirit in solving the problem of traffic congestion. Bread cast upon the water: you end the complications and costly delays of business district deliveries.

☐ 8. Tell of the important part your company plays in the economic life of your community.

Through good publicity you make yourself heard. And, more important, your listeners look upon you favorably. That's where your fourth check list comes in:

☐ 1. Get to know and understand your local press people. Tell them your side of the story in a frank, friendly way.

☐ 2. Make your stories and replies factual, accurate and complete. Avoid generalities.

☐ 3. Name a responsible member of your company to handle all contacts with the press.

☐ 4. Send information about your company regularly to the press. Newsworthy events are: promotions, safety records, modernization, em-

ployee sports, participation in civic projects, installation of new equipment, merit awards and service emblems, contributions to community fund.

☐ 5. Arrange to answer promptly all editorials and "Letters to the Editor" critical of the oilheating industry.

☐ 6. Get satisfied customers to speak up for you.

The oilheating industry faces stiff competition. To help you meet and overcome it, here's your fifth and final check list:

☐ 1. Tell the public—through advertising, through employees, through news releases—about the superiority of oilheating.

☐ 2. Stress the economy, efficiency, availability, convenience and comfort of oilheating.

☐ 3. Tell your customers and prospects how to *use* fueloil and oilheating equipment for best results.

☐ 4. Use the testimony of satisfied customers in your mailings and in your advertising.

Here are your five check lists for successful public relations. Now that you've checked and double-checked, give 'em the green light!

Honorable mention: CHARLES H. JONES, JR.

THE GREATEST WEAKNESS in the oilheating industry's public relations is the fact that many people in the industry tear down the type of oilburners that are being sold and have been installed by others.

Some go so far as to condemn and refuse to service some burners and even will not deliver oil to these consumers. In one development 19 homes out of 20 changed from oil to gas entirely due to the fact that they could not get satisfactory service for their oilburners.

The owners were convinced by their suppliers that the equipment was no good and unserviceable.

To the consumer an oilburner is an oilburner, and who makes it and the method of combustion is of no matter. They want service and oil and when they don't get it they condemn oil heat, becoming gasheating prospects.

What have we done about it? We have educated and trained our service men so that they are fully familiar with all types of oilburning equipment and know how to service them for top performance. It is amazing how many loyal customers we have acquired through our policy, "If it burns oil it is our job to keep it running right."

Training our own people is not enough. The thinking of the entire industry must be changed so that we all think that all oilheating equipment is the best although some may actually be better than others.

Service is the backbone of our industry. Those in the industry who refuse to service equipment not to their liking should learn who can and will service these burners in their communities, so that not even one oilheating customer will be lost to us by default.

Credit for low Incomes

Winner: LEONA K. HARRIS

EACH SECTION OF THE country presents different credit problems. The Middle West, I believe, is the field where a large per cent of the fueloil users are in the lower income bracket.

In merchandising fueloil, we found ourselves confronted with this problem: either spend all the profit in making small cash deliveries or develop a workable credit system. This credit plan would have to establish a budget for the customer, yet give us, as dealers, security for our commitments to the refinery.

During June, we wanted to make commitments to our supplier. We needed a yardstick. Since we are also in the heating business and had put in 90 per cent of the oilburning equipment in this immediate territory, we had created our own customer list of oil useres. The plan was for a Customer Budget Contract Note. These contracts, when signed by the customer, were negotiable notes to use as collateral for bank loans to purchase the necessary oil for summer deliveries. Still this budget plan had to be flexible for the customer; he would not sign a contract which would force him to purchase more oil than he could possibly use in case the winter was unusually warm, and he was not interested in making monthly payments that left him faced with a big hangover bill the first of May. Those who had established their normal needs were very easy to estimate and set up on an eight month basis. Even though this plan is based on October to May oil consumption, the payments are started October 1st; and the customer has the security of having his tank filled during August or September and as ordered during the winter months.

Let us say that John Doe has an established gallonage need of 1200 gallons. This amount was figured at the current price (12¢) and the contract drawn for $146.88, which included sales tax. The eight monthly payments, starting in October and continuing through May, would be $18.36 each. The ledger sheet was kept in the usual way, reflecting any increase or decrease in price and the exact amount of each delivery during the season. This contract would have worked out well for John Doe excepting that his aged mother came to live with him during the month of January.

Plan is flexible

There was still 55% of the heating season ahead, so Mr. Doe came in the first of February and a new budget was worked out which included his additional needs. In this case, the payments were increased to $25.50 per month. However, on the first of May, Mr. Doe's ledger sheet balance was only $22.25; and he had enough oil in his tanks to take care of all requirements although heat was needed late in the spring; so he paid the balance of $22.25 instead of the usual $25.50.

On the other hand, a neighbor who had been making monthly payments of $18.36 each month finished up the season with 250 gallons in his tank and his ledger sheet bore a balance of $38.60. We had underestimated his requirements and not reorganized his payments.

After the first year of working this plan, it was comparatively easy to establish the customer's potential needs. The Low Income Person welcomed the budget plan because it eased his heating expenses during the months of December and January; yet, by so doing, they gave us collateral with which to carry the load, and a closely estimated amount to pass on to our refinery.

The Customer Budget Contract Note plan does work for both the customer and the fueloil dealer.

Honorable mention: Ethel Troxel, out in Washington state, sent in a fine entry which concludes, "Know your customer." It follows:

OUR SALES FOR 1951 having reached a little less than a million gallons of oil with a credit loss of less than 1/5 of .01 of the gross sales, I feel as though I should write of our system of handling credit.

We belong to an Oil Dealers Association, on or before the tenth of each month each oil company sends in a list of delinquent accounts to an authorized concern or person to which a nominal fee is paid. The accounts to be rated in code as follows:

AA—Pays within 30 days
A—60 days delinquent
S—90 days delinquent
P & L—Charged off books as uncollectible

A typewritten list of these accounts and their ratings are mailed to each oil company to be referred to in case of application for credit. If at anytime a person's credit is cut off for nonpayment of bill, this person's name and address is immediately phoned into the head office and in turn is relayed to each oil company therefore stopping anyone from charging who already owes another concern a balance.

I personally go through my ledgers each month rating each account according to the list so I can tell which accounts need to be watched more so than others.

Many of our customers pay throughout the summer for oil purchased during the winter, however, these accounts must be paid in full before next heating season.

Through constant checking and study, to protect ourselves from loss, we know our customers' habits, salary, their lives in general. Much can be learned from the daily paper, death's disaster of all types that would have a bearing on their ability to pay their accounts. In order to keep the good will of the customer, at times such as these they receive no demand for payment, they are given reasonable time to overcome their troubles.

We know which customer to be stern with, which ones to go see, which ones not to contact by statement, phone, or otherwise. A note is made on each ledger sheet, as no person can be expected to remember each individual account, of the dates, the promises they have made and their paying habits. This is all put in code, such as "S" for slow, "P D" past due, "C B" Credit Bureau Account and etc. Each account is checked before oil is delivered. If an account is too high, a phone call is made and some arrangement is worked out in regard to payment. A payment larger than the oil delivery to be made, or oil to be paid for on delivery. No account is sent out COD without the customer being contacted through the office. This overcomes a customer being angry over a COD delivery. I can truthfully say we have never lost a customer through this system and have gained several cash customers while paying off their balances.

Our oil deliveries are made leaving a slip clearly marked, "This is your statement, bills due 10th of month following purchase." Most of our customers pay from these slips, cutting down the expense of statements. The few who do not pay receive a statement. The following is our procedure:

1. Statement—following 10th of month.
2. Please note—in 10 days.
3. Phone call—in 15 days.
4. Personal call—when promise is not carried out.
5. When account is one or two months past due without a satisfactory explanation we take steps to collect.

We find the most important thing, in the handling of charge accounts, is —know your customer.

Rhode Island promulgates State oilburner Regulations

ON SEPTEMBER 15 the Attorney General of the State of Rhode Island promulgated regulations "Applying to oilburner Installations, and the Storage and Use of a Fueloil or other flammable liquid Product used for Fuel." The Regulations are divided into two parts, the first applying to "General Regulations applicable to fueloil Installations" and covering the installation of fueloil tanks, sizes permitted, buried and aboveground, and similar information. Part II contains "Regulations applicable to power Oilburners, light fueloil Type" and requires, among other things, that constant level valves be provided for gravity feed burners, oil filters be installed on the oil supply line of all burners except those with gravity feed and low water cut-offs be attached to all steam boilers.

The Oil Heat Institute of New England has been active for the past two years in helping State authorities to prepare these regulations. Fred N. Beckwith, Institute executive secretary, declares "I think that these are as near perfect as any regulations now issued. They cover the essential points and cut out a lot of miscellaneous requirements which are unnecessary. They contain rules for the storage of fueloil and regulations applications to power oilburners of the light fueloil type. Sometime later we hope to get into the question of heavy oilburners, range burners and space heaters."

The complete text of the regulations follows:

PART I
GENERAL REGULATIONS APPLICABLE TO FUELOIL INSTALLATIONS

Sec. 1. DEFINITIONS AND CLASSIFICATIONS

For the purpose of these regulations, the following words shall have the meanings respectively assigned to them:

(a) "Permit"—Any permit required by these regulations and issued by the enforcing officer.

(b) "Light fueloil"—Any oil used as fuel, complying with specifications under Commercial Standards of Grades No. 1, No. 2 and No. 3.

(c) "Heavy fueloil"—Any oil used as fuel, complying with specifications under Commercial Standards of Grades No. 5 and No. 6.

(d) "Oilburner"—Shall mean any device designed to burn fueloil having a flash point of one hundred ten (110) degrees Fahrenheit or higher and having a fuel tank or container with a capacity of more than ten (10) gallons connected thereto.

(e) "Power burners"—Any burner that requires electricity, steam or air pressure for its operation.

(f) "Oilburning equipment" — Shall mean oilburners and all tanks, piping, control devices and accessories connected to the burner.

(g) "Person"—Shall mean an individual person, firm or corporation, co-partnership or association.

(h) "Lowest story"—A basement or cellar, and if there is no basement or cellar, the first story.

(i) "Enforcing officer"—Shall be the Chief of the fire department of the fire district wherein any violation of the provisions of these regulations may take place.

Exemptions: These regulations do not apply to portable burners not requiring connections to a flue, such as oil stoves, oil heaters and oil lamps, blow torches and soldering pots, etc.

Sec. 2. APPROVAL OF OILBURNER; EQUIPMENT, PERMITS AND CERTIFICATES

(a) All oilburners and all equipment in connection therewith shall be installed and maintained in accordance with these regulations.

(b) Where circumstances or conditions of any particular installation are unusual and such as to render the strict compliance with these standards impracticable, the enforcing officer having jurisdiction may permit such modifications as will provide a substantially equivalent degree of safety. Provided, however, that should the enforcing officer refuse to grant such modification as may be requested then and in that event an application may be submitted to the State Fire Marshal in accordance with the form hereinafter specified "Application for Modification"; any modification granted by the State Fire Marshal shall be accompanied by a written report setting forth the manner in which such modification will provide a substantially equivalent degree of safety as would have been provided by a strict compliance with these regulations. A copy of said report shall be filed in the office of the State Fire Marshal.

(c) Fueloil in excess of five (5) gallons shall not be kept or stored in any building or other structure without a permit having been obtained therefor from the enforcing officer. The enforcing officer may grant a temporary permit for the keeping and use of fueloil under such terms as he may prescribe.

(d) whoever desires to install any oilburner shall first make application to the enforcing officer and obtain a permit therefor. Upon receipt of an application for the installation of an oilburner, the enforcing officer shall grant a temporary permit authorizing such installation. Upon completion of the installation, the temporary permit shall be cancelled, and provided that all rules contained in this regulation have been complied with, the enforcing officer shall issue a permit for the storage of oil and the operation of the equipment.

(e) No permit shall be issued for any kind of oilburner which has not been approved by the Underwriters' Laboratories, Inc. or some other recognized laboratory.

(f) Any power oilburner for which a competent attendant will not be constantly on duty in the room where the burner is located, while the burner is in operation, shall be provided with an approved automatic means to prevent abnormal discharge of oil.

Sec. 3. FUELOIL

(a) The grade of fueloil used for any oilburner shall be one which tests and experience have shown to be suitable for use with that burner, but in no case shall the grade of fueloil be heavier than that for which the burner has been designed or adjusted.

(b) The fueloil shall have a flash point of not less than one hundred ten (110) degrees Fahrenheit, as determined by the Pensky-Martens closed tester in accordance with the standard method of test.

Sec. 4. FUELOIL TRANSFER

(a) Fueloil shall not be transferred to a storage tank by means of a pump or under pressure in any case where a tight connection is made between the discharge line and the tank inlet, unless such storage tank is designed to withstand the additional stress to which it may be subjected or unless the vent pipe for such tank is of sufficient size to relieve the tank of any undue pressure.

(b) The transfer of fueloil by the dealer or his agent to the storage tank, shall be made with utmost care to prevent spillage of oil.

Sec. 5. TANK CONSTRUCTION

(a) Except as provided in Paragraph (f) of this section, all tanks used for the keeping of fueloil shall be constructed wholly of metal. A tank, if cylindrical or elliptical and constructed of steel having a minimum tensile strength of 55,000 lbs. p.s.i. shall have shell plate and heads of a minimum thickness in accordance with the following table:

Capacity in Gallons			*Thickness*
Over 10 gal.	but not over	60 gal.	18 U. S. Gauge
Over 60 gal.	but not over	180 gal.	14 U. S. Gauge
Over 180 gal.	but not over	285 gal.	12 U. S. Gauge
Over 285 gal.	but not over	4,000 gal.	3/16 in.
Over 4,000 gal.	but not over	10,000 gal.	1/4 in.
Over 10,000 gal.	but not over	20,000 gal.	5/16 in.
Over 20,000 gal.	but not over	30,000 gal.	3/8 in.

(b) All joints or seams of such tanks shall be made tight and secure by welding, riveting, or other approved methods.

(c) Such tanks shall be tested by the manufacturer for tightness by being subjected to five (5) pounds pressure, and shall have affixed thereto a metal tag certifying that the tank was so tested; the said tag shall also bear the maker's name and address, together with the gauge thickness of the metal of which the tank is constructed, the minimum weight in pounds of the completed tank and the capacity of the tank in gallons.

(d) Such tanks, if other than cylindrical, shall be so constructed and have their sides, tops and bottoms so stayed or braced as to be capable of withstanding any pressure to which they may be subjected.

(e) Underground and enclosed metal tanks shall be protected against corrosion on the outside by heavy coatings of some approved rust-resisting material.

(f) A tank for the storage of heavy fueloil may be constructed of concrete provided the concrete consists of a mixture and the tank is so constructed as to withstand any stress to which it may be subjected; provided further, that the interior of the tank is so oil-proofed as to prevent exuding of the oil. A wall of a building or other structure shall not be used to support any part of any wall of a concrete tank; and a wall of such a tank shall not be used to support any part of a building or other structure. Such a tank shall have all pipe or other connections thereto made only at and through the top slab of the tank.

Sec. 6. TANK REGULATION

A tank of the storage of fueloil shall not be buried nor otherwise concealed inside or outside of any building or other structure unless a notification in writing shall be given to the enforcing officer and until, however, the said enforcing officer shall have completed an inspection of the installation and given approval or disapproval. In the absence of unusual circumstances the aforesaid inspection and approval or disapproval of the same shall be completed within two working days from the date of the receipt of the notification by the said enforcing officer.

Sec. 7. TANKS: INSTALLATION INSIDE BUILDINGS

(a) A fueloil tank of more than ten (10) gallons capacity shall not be located above the lowest story of any building or other structure used for habitation. A fueloil tank of more than sixty (60) gallons capacity shall not be installed above the lowest story of any building or other structure not used for habitation.

(b) An unenclosed fueloil tank shall not be located within five (5) feet horizontally of an open flame burner.

(c) The support for a tank shall be of non-combustible material and capable of supporting the superimposed load; and the tank shall be secured against settling, sliding or lifting.

(d) An exposed fueloil tank located within a building or other structure shall not have a capacity of more than eleven hundred (1100) gallons. If more than one exposed tank is used, the total capacity of all such tanks shall not exceed eleven hundred (1100) gallons provided, however, that in a multiple dwelling house no one tenant shall have connected to one burner more than two exposed 275 gallon tanks. All fueloil stored in a building or other structure in excess of eleven hundred (1100) gallons shall be buried at least twelve (12) inches below the level of the ground, under the lowest floor of the building or other structure or must be enclosed by masonry walls at least eight (8) inches thick which extend not less than one (1) foot above the top of the tank or tanks with all spaces around the tank or tanks completely filled with sand or other compact incombustible material and the top of the tank or tanks covered with not less than four inches (4") of sand or other compact non-combustible material; otherwise the enclosure shall have a roof of three (3) inches of gypsum or reinforced concrete plank or equivalent.

Except that where floor or roof construction above the enclosure is concrete or other fire resistive construction, the walls may be extended to and bonded to the underside of the construction above without a separate top being required.

Such a fire-resistive enclosure shall not require the use of a sand or other compact incombustible material fill around the tank; however any opening to such enclosures shall be provided with fire doors or other approved enclosure. Provisions shall be made for adequate ventilation to such enclosures prior to entering for inspection or repair on the tanks.

Instead of an enclosure as above described, the tank may be encased in a masonry wall not less than six (6) inches in thickness, applied directly to the tank so as to completely eliminate any air space.

Sec. 8. TANKS: INSTALLATION OUTSIDE BUILDINGS

Except as otherwise provided; a tank of more than two hundred seventy-five (275) gallons capacity for the keeping of fueloil for use in a building or other structure may

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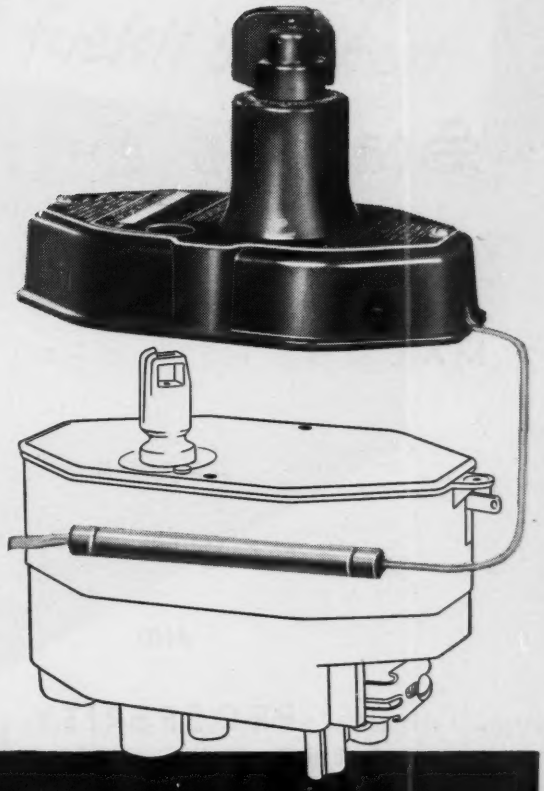

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be located outside of such building or other structure provided it is buried with the top not less than twenty-four (24) inches below the natural grade of the surface of the ground, or it may be located above the ground provided it is located not nearer than twenty-five (25) feet to any lot line. A tank of not more than two hundred and seventy-five (275) gallons capacity may be located outside of such building or other structure and aboveground provided it is protected as directed by the enforcing officer.

Sec. 9. VENTS

(a) A storage tank which is supplied by an outside fill pipe shall have an open vent pipe arranged to discharge to the open air and to pitch toward the storage tank. The vent opening and vent pipe shall be of ample size to prevent abnormal pressure in the tank during filling, but not smaller than one and one-quarter inch (1¼") iron pipe size for light fueloil and not less than two inch (2") iron pipe size for heavy fueloil.

(b) In no case shall the vent pipe opening be below the fill pipe opening, nor more than twelve (12) feet above said opening; and it shall be equipped with an approved weather hood. In case of heavy fueloil, the vent pipe opening shall be in full view of the fill pipe opening. Where more than one tank is installed, they may be vented through a common vent pipe.

Sec. 10. FILL AND OVERFLOW PIPES

(a) A storage tank of more than sixty (60) gallons capacity, located within a building shall be filled only through a fill pipe which terminates outside of the building. A fill terminal shall be closed tight when not in use, by a metal cover designed to prevent tampering; and shall be properly identified as a fueloil fill terminal by an approved metal plate or tag or some other permanent device.

(b) When two or more tanks are interconnected, a shut-off valve shall be installed in the discharge pipe from each tank, as close as practicable to the tank. A connection between two or more tanks to a common discharge line shall be permitted, provided the tanks are firmly fixed in place and the tops of such tanks are at the same level.

Sec. 11. OIL GAUGING

(a) A test well shall be allowed on any storage tank, provided it is closed tight when not in use by a metal cover designed to prevent tampering.

(b) A gauging device such as a liquid level indicator or a signal shall be so installed that oil or vapor will not be discharged into the building or other structure.

(c) Any gauging device installed on a fueloil tank shall be protected from physical injury.

(d) Any light fueloil tank installed within a building shall be provided with an approved device to indicate either visually or audibly at the fill point when the oil in the tank has reached a predetermined safe level.

PART II

REGULATIONS APPLICABLE TO POWER OILBURNERS, LIGHT FUELOIL TYPE

Sec. 12. OIL PUMPS

Where oil is supplied to a burner requiring gravity feed and a constant level valve is not incorporated in the burner assembly or in an auxiliary tank used in connection with an automatic pump, an approved constant level valve shall be installed in the oil feed line as close to the burner as practicable, to insure uniform delivery of oil to the burner. Unless the constant level valve is equipped with an anti-flooding device it shall be provided with a vent line carried to a point higher than the top of the supply tank and terminated with a return bend.

Sec. 13. PIPING AND TUBING

(a) Piping shall be standard wrought iron, steel or brass pipe with standard steel, malleable iron or brass fittings except that approved flexible metal hose may be used for reducing effects of jarring or vibration; or where rigid connections are impracticable. Unions which require gaskets or packing and right and left couplings shall not be used in oil lines. Copper tubing is recommended for suction and return lines where its use is practical.

(b) Pipe used in the installation of a burner shall not be smaller than three-eighth of an inch (⅜") iron pipe size. Copper tubing shall not be less than ⅜" O.D., with a wall thickness of not less than thirty-two one thousandths (0.032) of an inch. Flexible metal hose shall be installed in accordance with the limitations of its approval.

(c) Piping shall be rigidly secured in place and protected from physical injury; and where necessary, shall be protected against corrosion.

(d) Pipe and tubing shall be properly reamed; joints and connections shall be made tight; and in no case shall any joint or connection be concealed within a wall, partition or floor, provided that this shall

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not apply to a floor which is on the ground.

(e) Proper allowance shall be made for expansion, contraction, jarring and vibration. Pipe lines, other than tubing connected to underground tanks, except fill lines and test wells shall be provided with double swing joints so arranged as to permit the tanks to settle without impairing the efficiency of the pipe connections.

(f) Where storage tank is set below the level of the burner, the oil piping shall be so laid as to pitch from a high point at or near the burner toward the storage tank.

(g) An opening for a pipe through an outside wall and below the ground level shall be made oil tight.

(h) Except on gravity fed burners, the oil supply line to a burner shall be provided with an approved filter, unless the burner itself is equipped with such a device.

Sec. 14. VALVES

A readily accessible shut-off valve of an approved automatic type shall be installed in the oil supply line near each burner so as to automatically stop the flow of oil to the burner in case of fire at the burner, and a hand-operated shut-off valve shall be installed close to each oil supply tank.

Sec. 15. OILBURNER CONTROLS

(a) An automatically operated oilburner used in connection with a hotwater, steam or warm air heating systems shall be equipped with an approved automatic device that will shut down the burner in the event of undue pressure in the steam boiler or overheating within the hot-water boiler or warm air furnace. This automatic device, acting as a limit safety, shall be in addition to and separated from the regular operating control of the burner, and shall be connected into the burner supply circuit, or a thermal type of limit safety designed to cut off the supply of oil may be used in a warm-air furnace.

(b) When a steam boiler is equipped with an oilburner, it shall be equipped with an approved low-water cut-off that will shut off the power supply to any automatic oilburner in the event of low water. Said cut-off shall be connected into the main burner supply circuit.

(c) Each fully-automatic oilburner having a firing rate of more than ten (10) gallons per hour, and less than thirty-five (35) gallons per hour, shall be equipped with a type of combustion safety control which shall shut off the oil supply to the burner within twelve (12) seconds after flame failure.

(d) Each fully-automatic oilburner having a maximum firing rate in excess of thirty-five (35) gallons per hour shall be equipped with a type of combustion safety control which shall cut off the oil supply to the burner within four (4) seconds after flame failure.

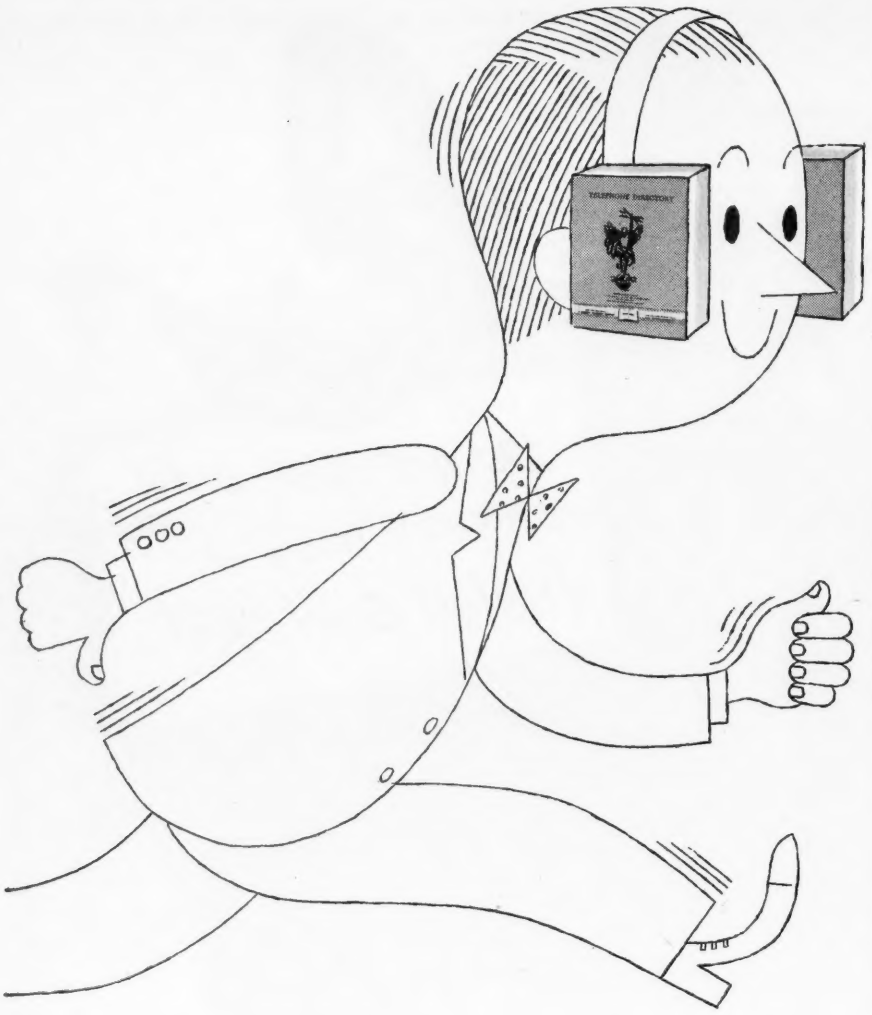
Sec. 16. ELECTRIC WIRING AND EQUIPMENT

(a) All electric wiring and equipment in connection with oilburners shall be installed in accordance with the regulations of the Board of Examiners of Electricians and any local requirements.

(b) A control to start and stop a light oilburner shall be installed at a location where the operator can view the fire.

(c) Where a stack relay control is used, it shall be so installed that it can be readily removed from the stack mounting flange for inspection of the metallic element without disconnecting the wiring.

(d) An approved device to stop the flow of current through all ungrounded conductors under conditions of excessive room



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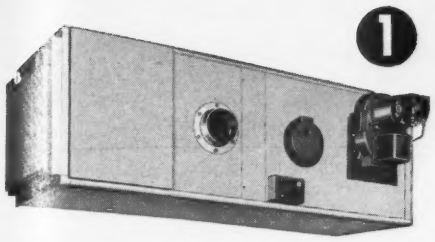
DISTRIBUTORS FOR

For Further Information Call Your Local Telephone Business Office



MODEL OY

❶ THE Luxaire. HORIZONTAL, OIL-FIRED FURNACE

For low-cost oil heat in homes and commercial applications

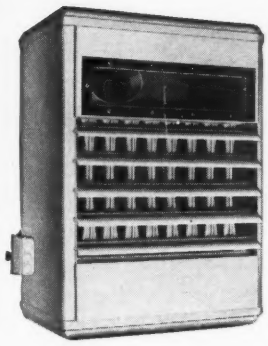
. . . Smartly styled, compact construction . . . Efficient, quiet operation
. . . LOW IN COST—High in Quality—112,000 B.T.U. input

Announcing 3 New Units!

Luxaire leads again in announcing three new products that make the Luxaire line more complete than ever. Each of these new products has met the most exacting laboratory and operating tests and includes all the high quality and high performance requirements demanded of all Luxaire products.

So—with this greater, well-balanced line of Luxaire heating equipment you can fill the order for practically any home or commercial warm air heating installation, or for any fuel.

Luxaire jobbers have Luxaire units in their stocks for immediate delivery. See the Luxaire jobber nearest to you.



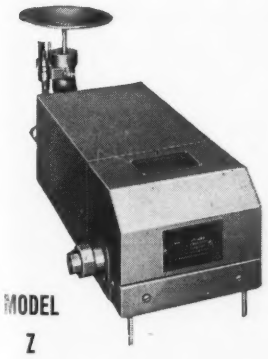
MODEL X

❷ THE Luxaire. Gas-Fired UNIT HEATER

The product of endless research for perfection in operating efficiency.

. . . Compact in size—Baked enamel finish.
. . . Ruggedly constructed heating elements.
. . . Ribbon type burners.
. . . Outstanding servicing and inspection features.
. . . Made in 4 sizes 60,000—90,000—115,000—170,000 B.T.U. Input.

Attractively PRICED



MODEL Z

❸ THE Luxaire. GAS CONVERSION BURNER OUTSTANDING in CONSTRUCTION and INSTALLATION FEATURES

. . . Less installation space required outside the furnace or boiler.
. . . Long lived, cast iron and stainless steel burner parts.
. . . All controls readily accessible by simply removing the duct cover.
. . . Attractively PRICED.

Send for literature giving complete description and specifications and the name of your Luxaire jobber.

THE C. A. OLSEN MANUFACTURING COMPANY . . ELYRIA, OHIO

® Luxaire HEATING & AIR CONDITIONING UNITS

Fueloil & oilheat

temperature shall be installed in the main power line at or adjacent to the heater.

Sec. 17. INSTALLATION

(a) An oilburner shall be installed by a capable mechanic and in accordance with the instructions of the manufacturer. All piping, copper tubing, fittings, connections and tanks shall be tight and free from oil leaks.

(b) A boiler or furnace in which an oilburner is installed shall be connected by a smokepipe to a flue which has sufficient draft to assure safe operation of the burner.

(c) A smokepipe for a light fueloil burner shall not be equipped with a manually operated damper.

(d) An automatic draft control, or its equivalent, is required for light fueloil burners, except where the equipment is so designed as to otherwise control the draft.

(e) The combustion chamber shall be constructed in accordance with the specifications of the oilburner manufacturer.

(f) Acceptance tests shall be conducted where more than one burner is installed in a single combustion chamber, or where a single burner has more than one firing head, in order to make sure that the automatic devices for preventing abnormal discharge of oil at the burner or burners will function properly in the event for failure of one or more units to ignite on starting, or in the event of flame extinguishment of one or more units during operation.

(g) A room or other enclosure in which an oilburner is located shall be provided with an adequate air supply for continuous complete combustion of oil.

Sec. 18. ENFORCEMENT

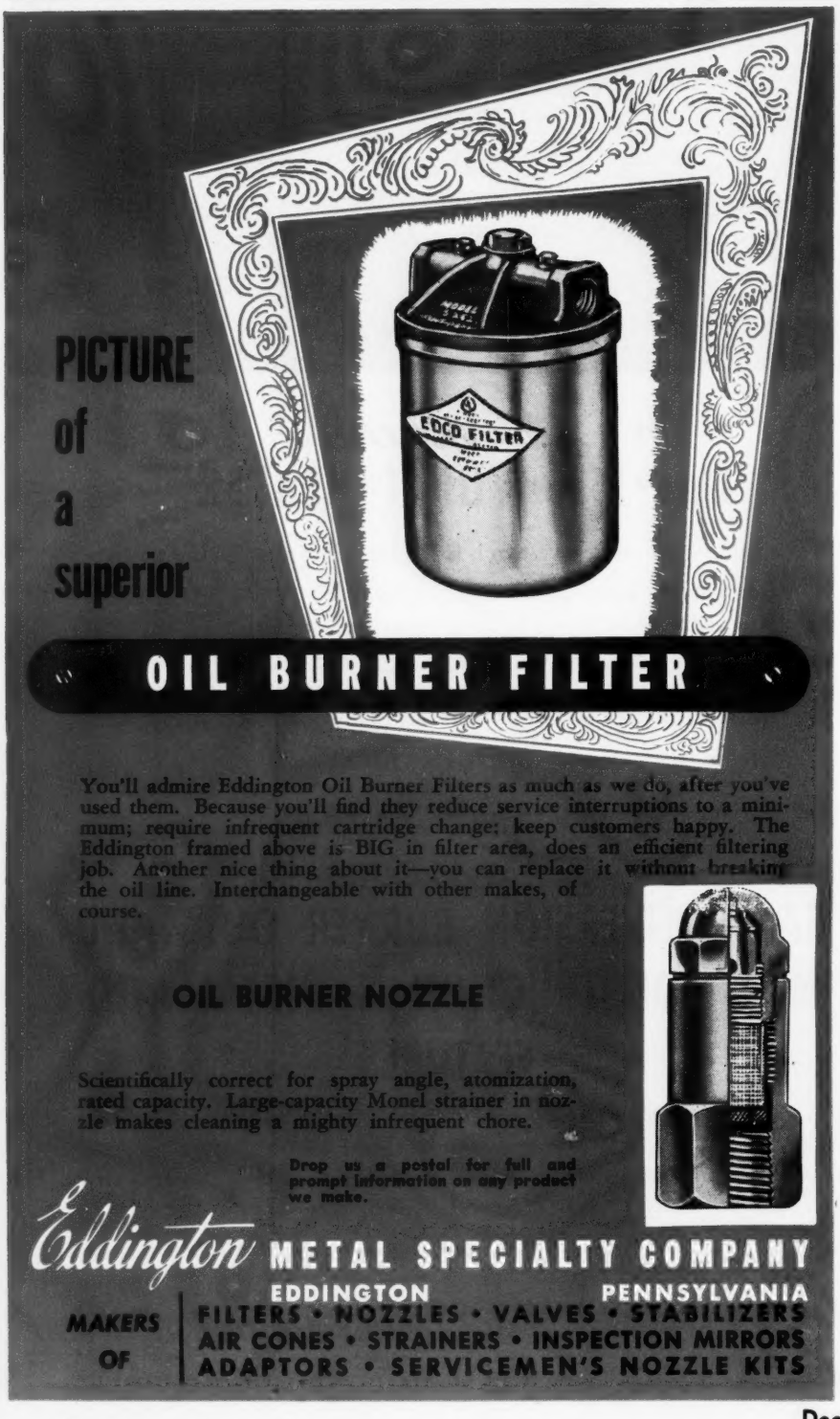
(a) The enforcing officer or the State Fire Marshal or his deputies may, at all reasonable hours, enter any building or premises within their jurisdiction, wherein an oilburning unit is installed or kept and the owner or occupant of such premises shall allow the Enforcing Officer or the State Fire Marshal or his deputies to enter upon and inspect the said oilburning equipment. If, in the opinion of the Enforcing Officer or the State Fire Marshal or his deputies, there shall be actual and immediate danger to life, limb or property, the Enforcing Officer or the State Fire Marshal or his deputies shall condemn and seal the supply valves of said oilburning equipment. A seal so placed shall not be removed without first obtaining authority from the enforcing officer or the State Fire Marshal or his deputies.

(b) The State Fire Marshal or his deputies shall cooperate in the enforcement of these regulations with full power and authority to investigate any violations and submit reports of their findings to either the enforcing officer, the town councils of the several towns, the city councils of the several cities, the representative council of the City of Newport or the Attorney General of the State of Rhode Island.

(c) If any part of these regulations shall be declared unconstitutional or invalid, such unconstitutionality or invalidity shall in no way effect the constitutionality or validity of any other portion thereof which can be given reasonable effect without the part so declared unconstitutional or invalid.

WILLIAM E. POWERS,
Attorney General.

September 15, 1952


PICTURE
of
a
superior
OIL BURNER FILTER
You'll admire Eddington Oil Burner Filters as much as we do, after you've used them. Because you'll find they reduce service interruptions to a minimum; require infrequent cartridge change; keep customers happy. The Eddington framed above is BIG in filter area, does an efficient filtering job. Another nice thing about it—you can replace it without breaking the oil line. Interchangeable with other makes, of course.
OIL BURNER NOZZLE
Scientifically correct for spray angle, atomization, rated capacity. Large-capacity Monel strainer in nozzle makes cleaning a mighty infrequent chore.
Drop us a postal for full and prompt information on any product we make.
Eddington METAL SPECIALTY COMPANY
EDDINGTON PENNSYLVANIA
MAKERS OF
FILTERS • NOZZLES • VALVES • STABILIZERS
AIR CONES • STRAINERS • INSPECTION MIRRORS
ADAPTORS • SERVICEMEN'S NOZZLE KITS

Fueloil Prices adjusted in Washington State and D. C.

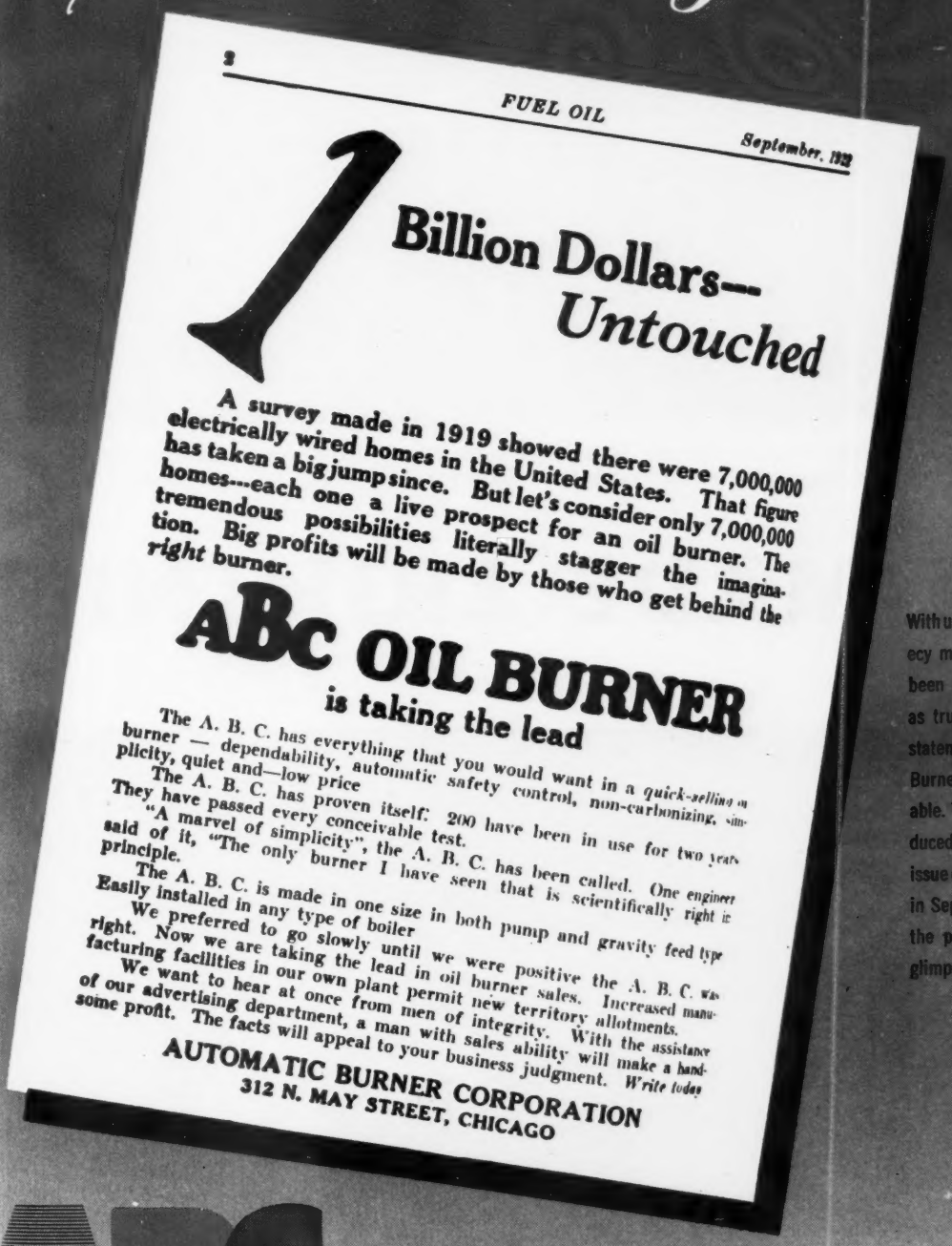
FUELOIL PRICE INCREASES designed to restore pre-Korean earnings to marketers were granted to three separate marketing areas of the State of Washington.

The price changing actions signed by Paul A. Volpe, Acting Director of OPS Regional Office 13, authorized ceiling price boosts to a half-cent per gallon for kerosene, No. 1 and No. 2 heating oils, furnace oil, range oil and stove oil to tank wagon distributors in the Bremerton-Port Orchard marketing area. A four-tenths of a cent per gallon boost was granted in the Bellingham-Ferndale area and two-tenths of a cent in the Mount Vernon-Sedro, Woolley-Burlington and Anacortes marketing areas.

The increases were granted through Special Orders 3, 4 and 5 to Section 11D of ceiling price regulation 17 and became effective November 13th.

Action taken under Amendment 7 to Ceiling Price Regulation 17 granted retail distributors of fueloil in Wash-

True in 1922... Still true 30 years later



2 FUEL OIL September, 1922

1 Billion Dollars— Untouched

A survey made in 1919 showed there were 7,000,000 electrically wired homes in the United States. That figure has taken a big jump since. But let's consider only 7,000,000 homes...each one a live prospect for an oil burner. The tremendous possibilities literally stagger the imagination. Big profits will be made by those who get behind the *right* burner.

ABC OIL BURNER is taking the lead

The A. B. C. has everything that you would want in a *quick-selling* oil burner — dependability, automatic safety control, non-carbonizing, simplicity, quiet and—low price

The A. B. C. has proven itself: 200 have been in use for two years. They have passed every conceivable test.

"A marvel of simplicity", the A. B. C. has been called. One engineer said of it, "The only burner I have seen that is scientifically right in principle."

The A. B. C. is made in one size in both pump and gravity feed type. Easily installed in any type of boiler

We preferred to go slowly until we were positive the A. B. C. was right. Now we are taking the lead in oil burner sales. Increased manufacturing facilities in our own plant permit new territory allotments.

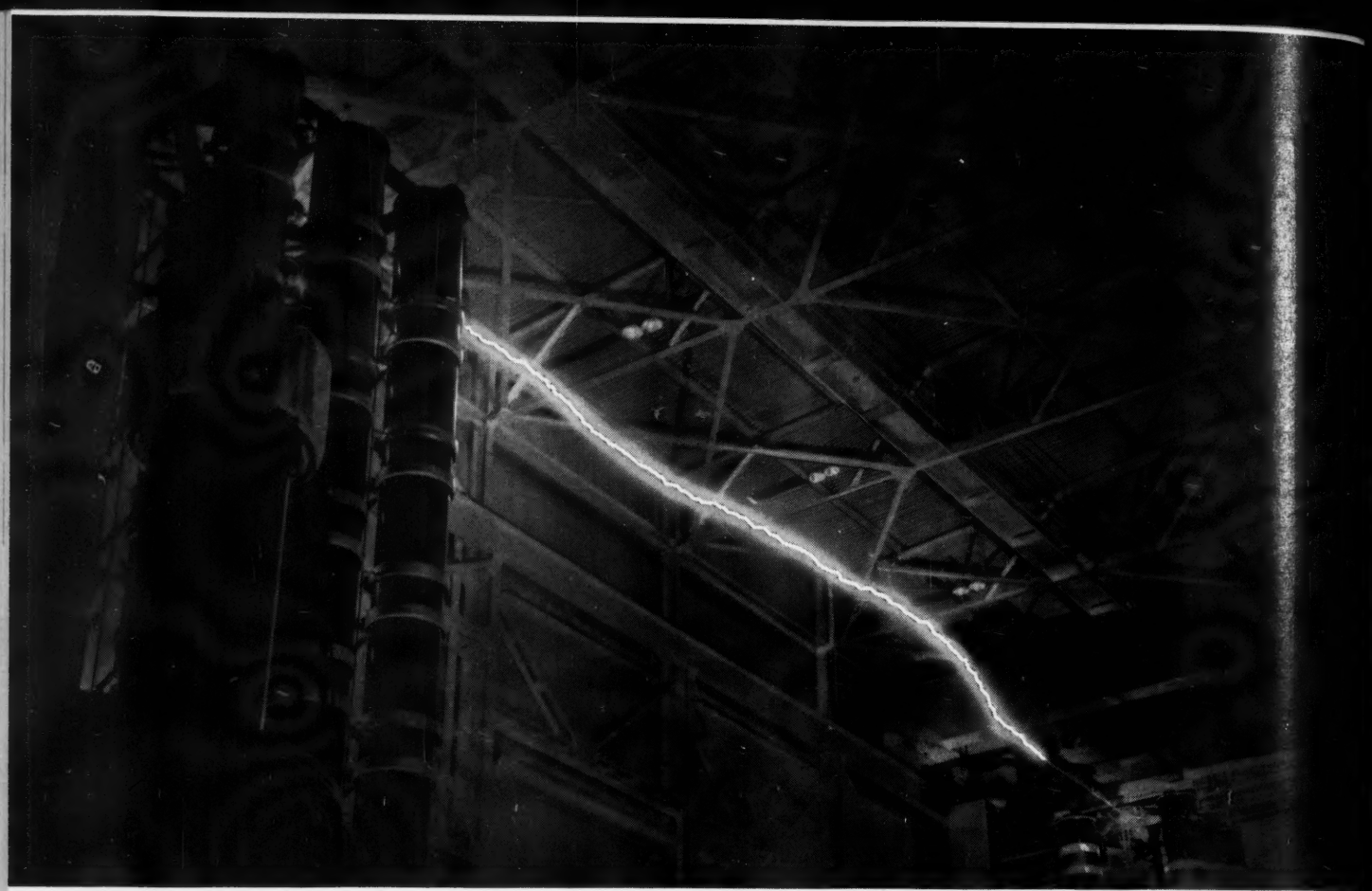
We want to hear at once from men of integrity. With the assistance of our advertising department, a man with sales ability will make a handsome profit. The facts will appeal to your business judgment. *Write today*

AUTOMATIC BURNER CORPORATION
312 N. MAY STREET, CHICAGO

ABC OIL BURNERS

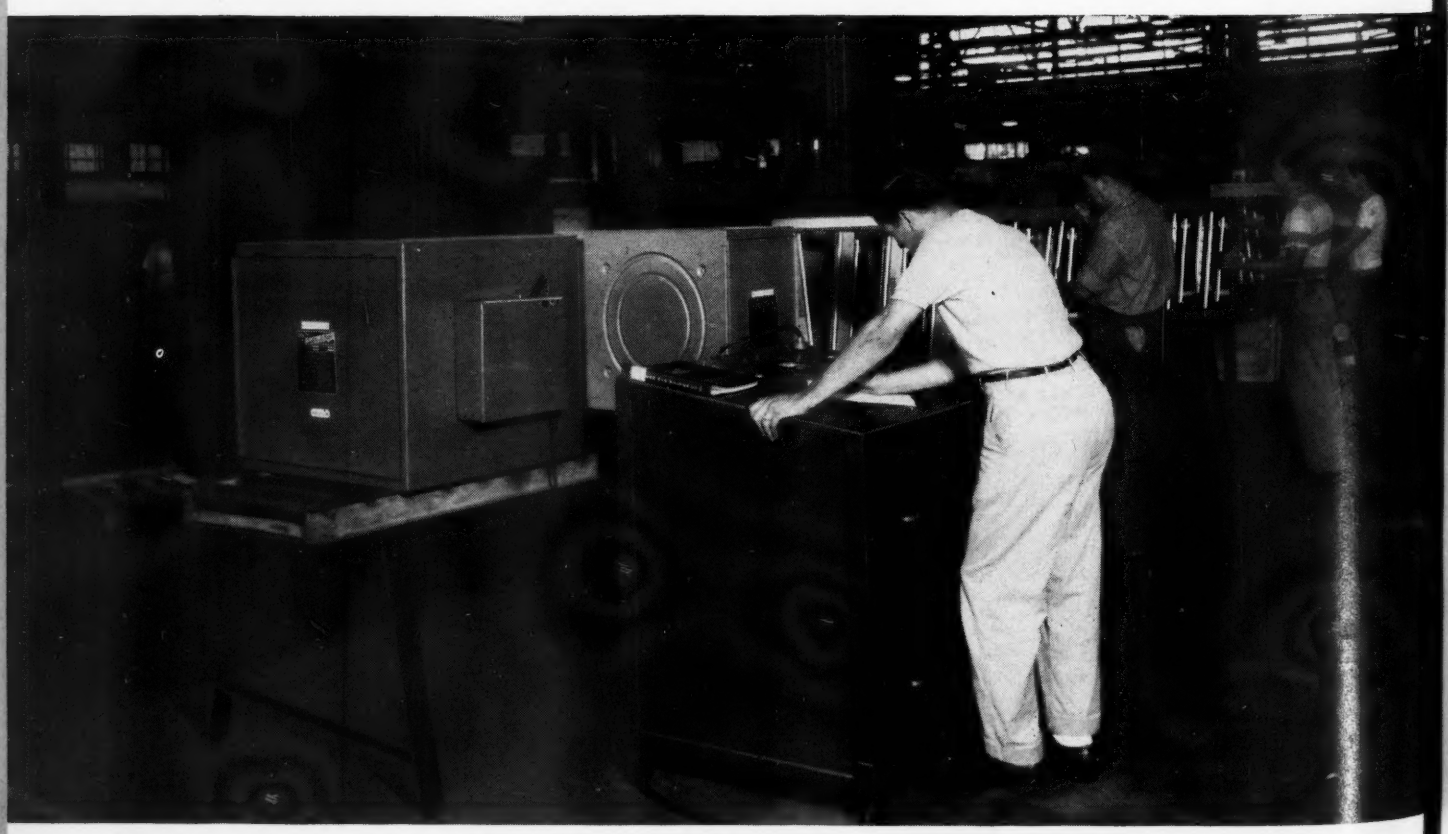
AUTOMATIC BURNER CORPORATION
1823 CARROLL AVENUE • CHICAGO 12, ILLINOIS

With uncanny accuracy, a prophecy made thirty years ago has been fulfilled. In like manner, as true today as in 1922, the statements made for A B C Oil Burners have proved dependable. The advertisement reproduced here is from the third issue of Fuel Oil which appeared in September, 1922. Reviewing the past sometimes affords a glimpse into the future.



15,000,000 VOLTS flash 50 feet between giant lightning generators in General Electric's High-voltage Engineering Laboratory. Tests and research performed here make many improvements in various types of high-voltage equipment.

MAN-MADE LIGHTNING



TESTING AND ASSEMBLY of Electro-Klean units equipped with G-E Power Packs takes place in American Air Filter's Louisville plant.

MR. WILLIAM REED, president of the American Air Filter Company says, "We feel that the G-E power pack we use is one of the major advances in this field."

AAF'S ELECTRO-KLEAN UNIT, shown above, relies upon General Electric power pack to supply high-voltage direct current needed for electrostatic precipitation process. Power pack can be seen mounted at left of larger unit.

HELPS CLEAR THE AIR

High-voltage research aids in development of power pack for home air-filter equipment

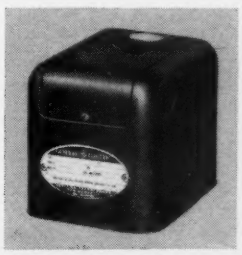
Today at General Electric's High-voltage Engineering Laboratory in Pittsfield, Mass., 15-million-volt lightning strokes—most powerful ever created by man—are discharged at will under controlled conditions. Here, basic research on high voltage contributes to the improved design of many types of electrical apparatus.

High-voltage power packs, for example, have now been developed by G. E. for a new type of electrostatic air cleaning equipment for the home—a brand new development in connection with home heating. Through electrostatic precipitation, dust particles as small as .25 micron (1 micron = 1/25,000 inch) can be collected! This process, used industrially for more than 40 years, is recognized today as the most efficient method for the control of fine particles of dust, smoke, soot, pollens or fumes in the home.

Working with G-E engineers, American Air Filter has succeeded in adapting this process to the home-heating field. The new AAF "Electro-Klean" unit, equipped with a G-E high-voltage power pack, is another indication of General Electric leadership in heating components. A leadership born of more than 25 years experience in supplying high-voltage equipment to the heating field. General Electric Co., Schenectady 5, N. Y. 411-103

IGNITION TRANSFORMERS

Another G-E product which contributes to the reliability of modern heating equipment. Exclusive 2-way self-shielding adds assurance against radio and tv interference.



GENERAL ELECTRIC

Big Market!
Good Profits!
Repeat Sales!

Klemm

FUEL OIL FILTERS

Only a Klemm Filter can match a Klemm Filter in *extra values.* Your customers will be quick to see the additional advantages *... and that means easier, faster, more profitable sales for you.*

Klemm Filters alone have CHEMISTONE —the original controlled porosity element. The Klemm is a *filter*—not a strainer. It keeps oil-burning equipment at top efficiency by removing dust, dirt, water, etc.

Cash in on the big ready-made market—space heaters, boilers, ranges. Sell Klemm Filters on your service calls. Every sale means a satisfied customer. ORDER A SUPPLY FROM YOUR JOBBER TODAY.

DISPLAY...TELL...SELL!

This eye-catching display is sent to you with each order for 12 or more Klemm (Jr. Model) Oil Filters. Shoppers and walk-in customers are sold while they wait.

Millions Since 1932

Klemm

AUTOMOTIVE PRODUCTS CO.

1718 N. Damen Avenue • Chicago 47, Illinois
Mfd. in Can. by Elgee, Ltd. 410 Hopewell—Toronto
Export Div.: Guiterman Co., Inc. 35 S. Williams St., New York, N. Y.

ington, D. C., a one-tenth of a cent per gallon ceiling price increase. This was the second area increase granted to distributors under the regulation which assures them pre-Korean earnings.

The Washington, D. C. increase applies to the District, Alexandria, Arlington and Fairfax counties in Virginia, and Montgomery and Prince Georges counties in Maryland.

❖

Secondary storage inadequate, says McIntosh, Socony

SECONDARY STOCKS of distillate fuel-oil are inadequate, concludes A. J. McIntosh, head economist, Socony-Vacuum Oil Co., Inc., in an analysis of the September 1 figures on secondary inventories released by the Bureau of Census last month. The report was prepared for circulation among personnel of the Socony-Vacuum organization.

Noting that the new set of figures again points up that "the importance of secondary stocks as compared to the stocks that we have known about, i.e., refinery, terminal, pipeline and in transit stocks, are not very great," McIntosh continues, "Distillate fuel-oils did show a considerable increase at the end of August over last year; mostly in District #1 where 1.5 million barrels additional inventory were on hand." This is attributed in part to a large build-up since July and a normal year-to-year growth. However, "it is interesting to note that the growth since last year amounts to some 16%, which is greater than the anticipated increase in demand. This seems to give evidence to the fact that the secondary inventories are keeping pace with the demand and are showing a substantial seasonal increase."

For the other districts, McIntosh notes that the changes since last year are insignificant in volume and that District #5 shows less on hand now than last year. This has been more than offset, though, by higher stock at the primary level.

McIntosh next worked out approximations for the 1952-53 average annual volume of distillates for each district which would be handled from sec-

Let QUALITY Be Your Guide!

specify couplings by

Guardian

and get these exclusive features . . .

1. "SILENT TENSION"*

Provides clearance for rapid assembly and snug fit, reducing wear. Extruded aluminum sleeve formed under closer tolerance obsoletes former production of steel sleeve with embossed splines.

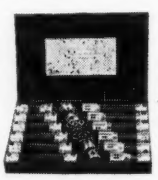
*Patent applied for. There is only one "Silent Tension" splined sleeve coupling—Guardian makes it.

2. "DYNA-LINE" FABRICATION

An exclusive Guardian process aligns end-fittings and flex-element. Spins them into union while in a dynamic state—running true.

3. NEW "TRUE-FLEX" RUBBER ELEMENT

Special synthetic reinforced. Properly engineered to correct O.D. and durometer for maximum service life.



HANDY SERVICEMEN'S KIT

Meets 97% of service needs. Get one—keep it filled for extra profits on coupling replacements.

Insist on Guardian Quality . . . It is True Economy!

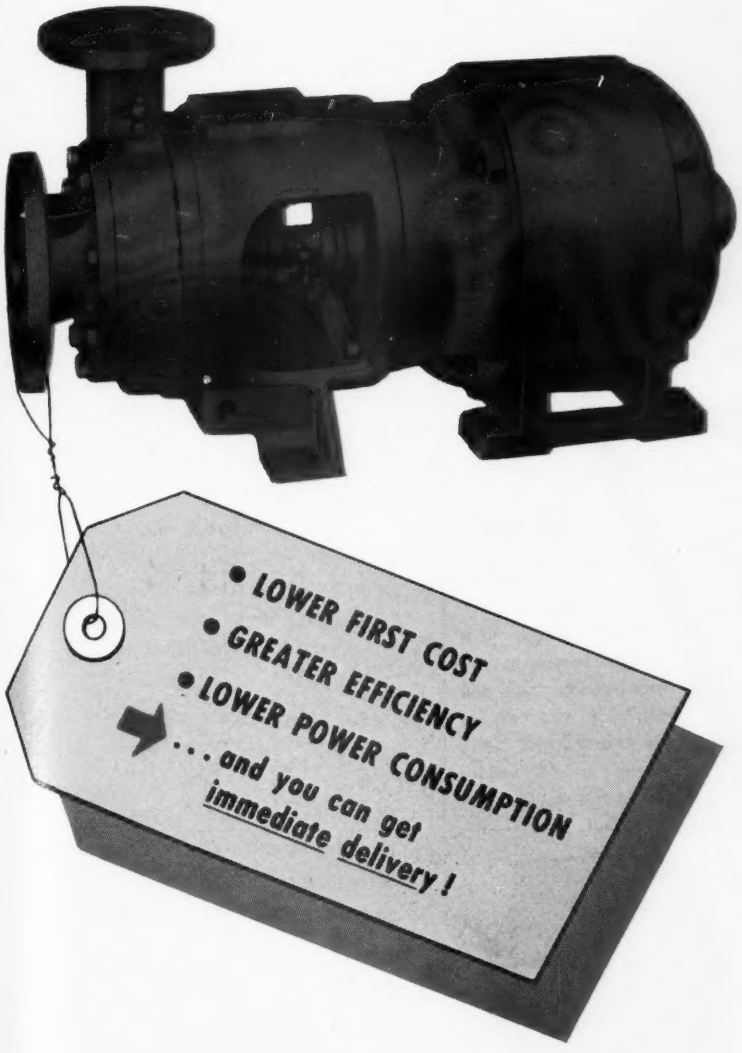
Write for Complete Data on Guardian Flexible Couplings and Guardian Oil Heat Valves.

Guardian
PRODUCTS CORP.
COUPLING DIVISION

Dept. F-122, 1231 East Second Street

Michigan City, Indiana

more payloads in every week



YOU CAN DO IT WITH THESE EFFICIENT MOTORPUMPS FOR FUEL OIL HANDLING

These are facts based on records maintained by fuel oil dealers across the country: You can pump fuel oil into tanks and trucks with Ingersoll-Rand Motorpumps at a faster rate . . . and do it at a direct saving. This means you put your trucks on the road faster—delivering more payloads every week. Further, save on first cost and on power consumption.

Ingersoll-Rand offers you IMMEDIATE DELIVERY on a range of types and sizes of Motorpumps. Warehouses and service engineers are located in all principal cities. Simply contact your nearest Ingersoll-Rand representative and make more with the Motorpump. Meantime, write for the descriptive literature. INGERSOLL-RAND COMPANY, 11 Broadway, New York 4, New York.

MOTORPUMP

. . . designed for

PETROLEUM MARKETING SERVICE

available in sizes from ¼ to 50 hp.

Ingersoll-Rand

11 BROADWAY, NEW YORK 4, N. Y. 821-9

ondary bulk plants, shown against the stocks on hand at the end of August and the number of days' supply each district is carrying. (Table 1.)

"We believe that bulk plants are carrying around 33 days supply, which represents 9% of the annual volume. These are very consistent for most of the districts. This result did not in any way influence the estimate of the annual volumes. If these indications are true, it would seem that the secondary stocks, representing some 9% of the total volume are very inadequate. Even when the stocks are ignored and the actual shell capacity of the tanks is substituted for the average of the four districts east of California, we find that the tankage in place represents less than 14% of the annual estimated sales. This clearly indicates that the average secondary inventory operator is living from hand to mouth. Just how much season accumulation he actually accomplishes will have to await further reports.

Table 1

(Millions of Bbls.)	Annual Volume (Av. 1952-53)	Stock on Hand 8/31/52	Day's Supply	% Annual Demand
#1	122.3	11.4	34	9.3
#3	12.8	1.0	29	7.8
Total	135.1	12.4	34	9.2
#2	77.4	6.7	32	8.7
#4	5.5	0.5	33	9.1
Total	218.0	19.6	33	9.0
#5	25.2	1.2	17	4.8
U. S.	243.2	20.8	31	8.6

Table 2

DISTILLATES

Refy. Term. Etc.	Secondary	% Secondary Vs. Refy. Aug. 31	% Secondary Vs. Refy. July 31
39.1	11.4	29	30
17.4	1.0	6	6
56.5	12.4	22	22
35.2	6.7	19	20
2.1	0.5	24	28
93.8	19.6	21	21
10.5	1.2	11	12
104.3	20.8	20	20

Table 3

Storage Cap.	Stocks on Hand	% Full Aug. 31	% Full July 31
15.1	11.4	75	60
1.9	1.0	53	47
17.0	12.4	73	59
12.3	6.7	54	48
0.8	0.5	63	63
30.1	19.6	65	54

Table 4

DISTILLATES

Aug. 31 1951	Aug. 31 1952	July 31 1952	Aug. 31 '52 Vs. Aug. 1951	Aug. 31 '52 Vs. July 1952
9.9	11.4	9.1	1.5	2.3
0.8	1.0	0.9	0.2	0.1
10.7	12.4	10.0	1.7	2.4
6.4	6.7	5.9	0.3	0.8
0.5	0.5	0.5	..	..
17.6	19.6	16.4	2.0	3.2
1.4	1.2	1.1	—0.2	0.1
19.0	20.8	17.5	1.8	3.3

Have you tried... Monarch Nozzles—Lately?

- Balanced, clean and efficient fires from .60 to 2.00 gph.
- As easy to install as an ordinary Air Cone and Stabilizer.
- No "adjustments" to tinker with or get out of order.
- Rugged, all metal construction.
- Costs less than any other "Head."

Monarch Nozzles Best-By Fire Test

Having Nozzle trouble? Fires crooked? Lopsided? Streaky? Smoky? Take a tip from Monarch ("R" Series solid or "NS" Hollow Sprays) and see the difference.

Circular #4150

Circular #12251

New "48" Nozzle Box

Don't jumble your nozzles loosely in your tool box like "nuts and bolts" if you expect them to be usable. Carry as many as 48 nozzles securely in this sturdy, compact steel box.

Write for Catalog D

MONARCH MFG. WORKS, INC.

2503 E. ONTARIO ST., PHILADELPHIA 34, PENNA.

Canadian Sales Agents: (Except B.C.) Canadian General Filters, Ltd., 2679 Danforth Avenue, Toronto 13
Central and Southern Europe: A Coutau, Rue de la Scie 16, Geneva, Switzerland

"Another interesting thing shows up and that is that secondary inventories of distillates at the East Coast increased 16% over last year, while the primary inventories increased 14%. District #3 secondary inventories are rather small, but they did show an increase, whereas the primaries were still showing a decrease. In District #2 secondaries increased about 5%, while the primaries increased some 15%. For the U. S. as a whole, the secondaries showed an increase of between 9% and 10%, and the primary inventories increased about 11%. From this we find that by and large the same trends show up in the secondaries as compared to last year, as we find in primary figures."

Table 2 compares refinery, terminal, pipeline and in transit stocks with secondary stocks; table 3 compares secondary stocks and tankage capacity; table 4 presents a comparison of secondary stocks by districts.

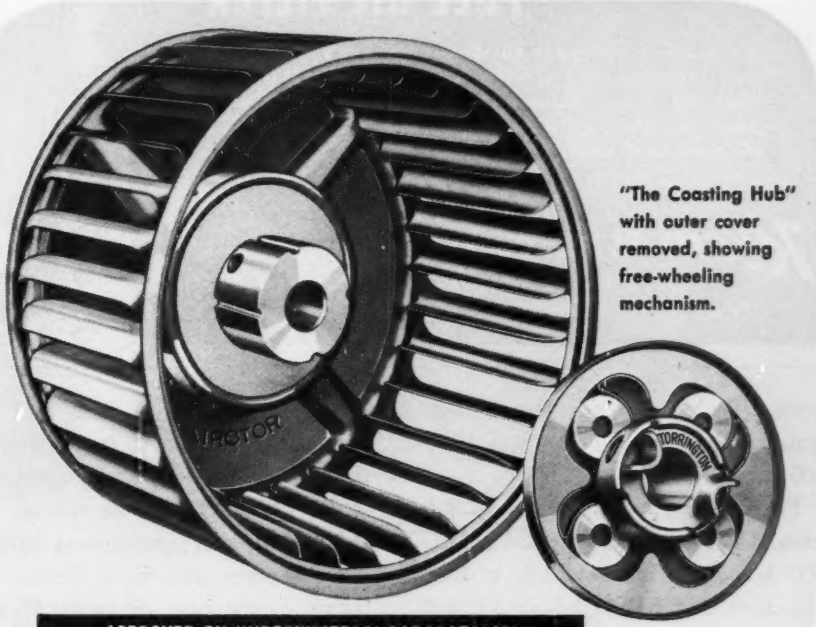
Survey highlights small town Market

A SURVEY, conducted earlier this year by *Household* magazine, pointed up the increasingly important part being played by the small cities and towns in the purchase and use of household materials and equipment. Conducted among a representative cross-section of its 2,100,000 circulation, the survey shows that 78% of these non-metropolitan families own their own homes, compared with 76% in 1951. Additionally, 103,000 homes were built in 1952, up from the 94,000 new homes constructed in 1951 and 78,000 in 1950.

One portion of the survey asked what type of heating system and fuel was in use in these homes. Better than one-third are using warm air furnaces, actually 36% or 756,000 homes; 10.8% or 226,800 homes are heated with steam, vapor or hot water systems; 8.5% or 178,500 homes use floor furnaces and 0.8% or 16,800 reported other types. Circulating heaters and stoves were checked by 42.6% or 894,600 of the readers, divided as follows: Oil, 15.2%; gas, 14.7%; coal or wood, 12.5% and other types,

TORRINGTON'S *Coasting Hub*

SOLVES THE "AFTER-FIRE" PROBLEM



"The Coasting Hub" with outer cover removed, showing free-wheeling mechanism.

APPROVED BY UNDERWRITERS' LABORATORIES

- Maintains air supply until fire burns out clean!
- Eliminates customer complaints of soot, smoke and shudder!
- Reduces fouling of electrodes!
- Requires no electrical work to install!
- Goes anywhere a standard wheel is used!
- Fits any standard shaft extension!
- Furnished to drive Lovejoy, Guardian and Flexco couplings!
- Provides new, clinching sales appeal at low cost!
- Every oil burner owner is a natural replacement prospect!
- Built to last a lifetime!

For complete information on the Fan with the Coasting Hub write Torrington today . . .

The TORRINGTON MANUFACTURING COMPANY
TORRINGTON, CONNECTICUT

More profit per service call!

Klemm

FUEL OIL FILTER

It's easy to sell your customers on heating comfort and uninterrupted service with trouble-free Klemm Fuel Oil Filter. Unique Chemistone filter element positively traps all sediment, rust, water, etc.—leaves oil pure and clean!

- Easy to install
- 4 models—for every type of burner
- Available in metal or glass
- Low cost
- Guaranteed performance
- Metal bowl models listed by Underwriters' Laboratories

Order today from your jobber!

Klemm PRODUCTS Div. of Klemm Automotive Products Co. 1718 N. Damen Ave. • Chicago 47, Ill.
Manufactured in Canada by Elgee, Ltd., 410 Hopewell—Toronto
Export Division: Guiterman Co., Inc., 35 S. William St., New York, N. Y.

0.9%. Thermostats for heating systems were reported by 43.8%, or 919,800 families.

Fuels used were indicated as follows: Coal or wood, 24.8% or 520,800 homes, including 5.1% stokers; gas, other than LP, 16.8% or 352,800 homes; LP gas, 1.3% or 27,300; oil, 15.1%, 317,100 homes and 0.4% did not specify which fuel was burned.

❖

Imperial products Pipeline to Toronto already in service

THE FIRST GASOLINE ever delivered to Toronto by pipeline arrived there November 5, through Imperial Oil's Sarnia products pipeline.

The line already carries products manufactured at Imperial's Sarnia refinery to areas of London and Hamilton, Canada. Through it will flow gasolines, diesel oil, stove oil and furnace fuels. The products are shipped through the line in batches. Strict control of the flow prevents mixing.

The Imperial pipeline was built to provide surer and more flexible delivery. In the past, oil products were delivered to Hamilton and Toronto from Sarnia by lake tankers. When winter closed lake navigation, Toronto and Hamilton areas were dependent on supplies which had been stored in the summer months, or those which could be brought in by rail and road. Pipeline operation is not affected by the weather, and will provide day-to-day deliveries the year around.

The line has a present capacity of 39,000 barrels, or 1,365,000 gallons a day, but with the addition of another pump station, this volume can be increased. The terminal is at Ashbridge's Bay.

Letters

BROWN PRODUCTS COMPANY

Forest Hills, N. Y.

Editor:

Your article in the September issue dealing with "Sell more baseboard Radiation," by Lionel L. Jacobs, is definitely an asset to the baseboard industry.

However, under "Heating installation Problems," paragraph 4, Mr. Jacobs makes a notation, "There would seem to be no justification for two-pipe radiation, which increases installation costs and develops air difficulties."

We stress the point that we make a two-pipe baseboard unit, which cuts labor installation costs in half, and has almost twice the output of a single-pipe baseboard unit. Our baseboard

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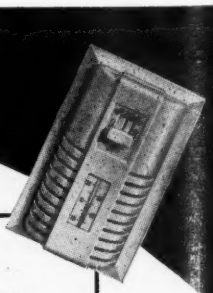

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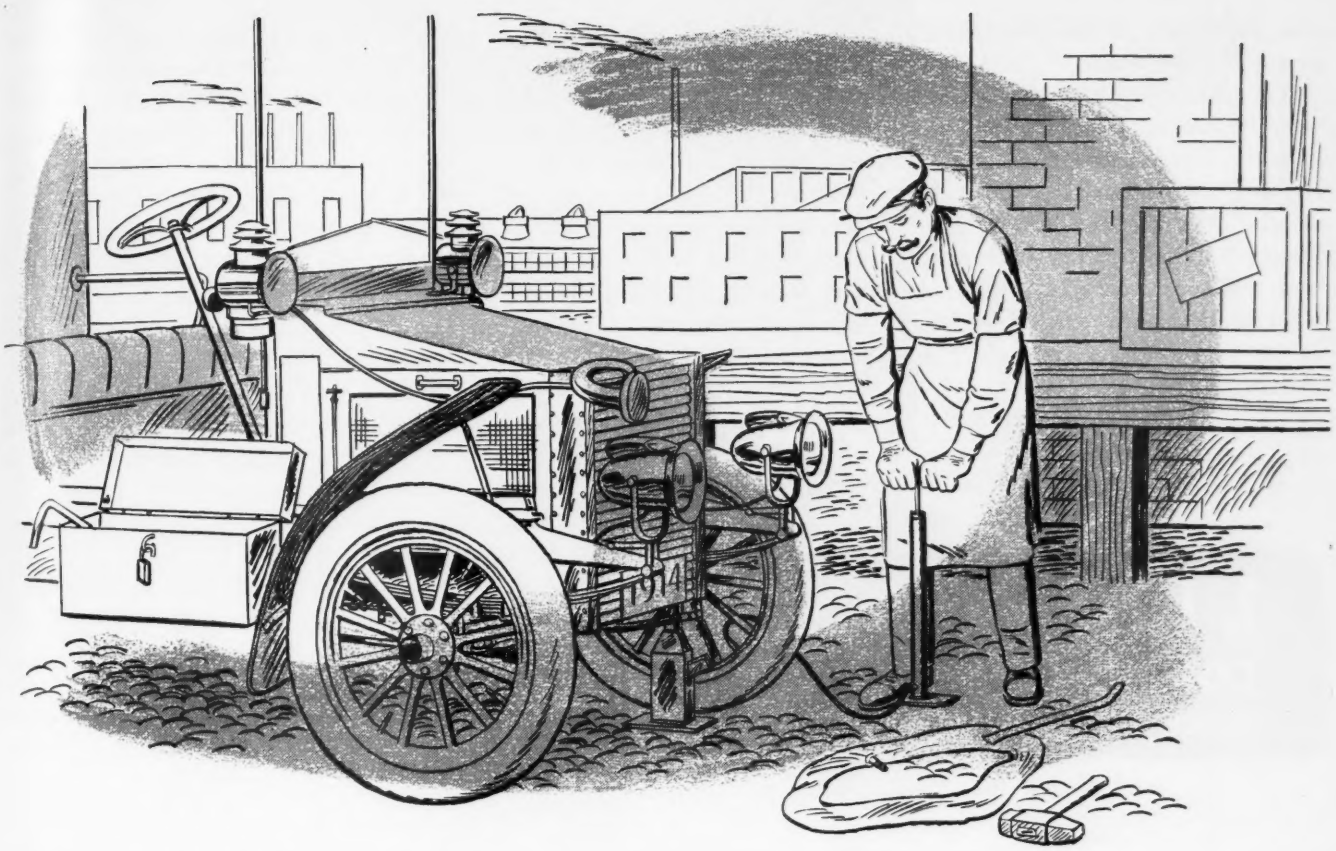

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eliminated the need for this back-bending labor!

Compressed air, used in numerous industrial applications to lift, move, clean and spray, also provides the riding cushion for millions of vehicles.

Powerful, efficient compressors, equipped with specially adapted motors, make this commodity an important and useful tool for industry. Car-owning families are patrons of "free-air" service, made available through America's 190,000 filling stations, thanks to that same number of dependable air compressors.

Emerson-Electric Motors were first used on air compressors in 1899, and the progress of the industry has been matched with improvements in the motor drives.

Emerson-Electric builds dependable, efficient motors for equipment used in industry, in business, on the farm and in the home. There is a complete line of Emerson-Electric standard motors in horsepower ratings from 1/20 to 5, and hermetic motor parts in ratings from 1/8 to 15 horsepower. Your inquiry is invited.

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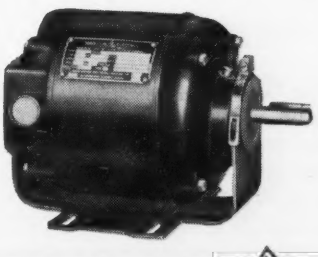
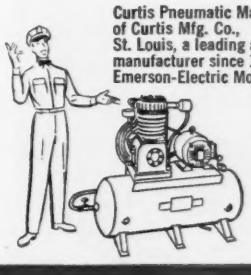
- ☐ M153-B Split-Phase
- ☐ M153-C Integral
- ☐ M153-D Fan-Duty
- ☐ M153-E Oil-Burner
- ☐ M153-F Jet Pump
- ☐ M153-G Blower





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EMERSON ELECTRIC
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does not develop air difficulties either, as stated in the article.

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A. BROWN

NEW HAVEN, CONN.

Editor:

I was interested in the "Reminiscences" in the July 1952 issue and was glad to hear thus indirectly from my old friend Chalmers and several others who were in the game at the time I was designing oilburners, beginning way back in old No-Kol days. The efficiencies produced by some of the old timers were hard to beat, even in these times.

Remember the high tension magnetos for producing ignition—used by Kleen-Heet and others? And the Sundstrand burner which had a pot into which only air was introduced and above which a nozzle, situated in the firing door, shot down the oil spray into the pot, a forerunner of the present G-E system? Then there was the Sword-Kimber burner, which drew in gas from the combustion chamber through a blower, combining this gas with the air for combustion. The nozzle, located well back, squirted a solid stream of oil onto a corrugated plate in the metal combustion chamber.

Sincerely yours and best of luck for good times.

F. L. HAMMER

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COMBUSTION CHAMBERS
QUICK HEAT LONG LIFE

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ROUND
SQUARE
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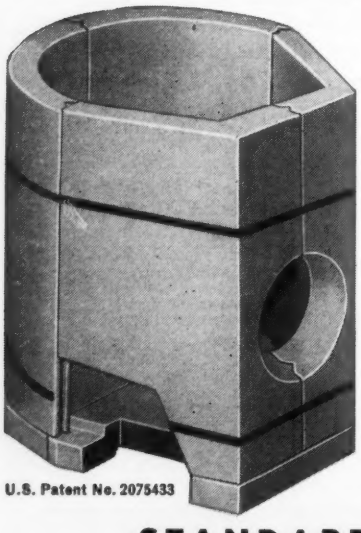
ALL BOILERS & FURNACES



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AIR SPACE BENEATH FLOOR

4 SHAPES
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CLOSE TO ONE HALF MILLION INSTALLATIONS

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OHI of New England announces Schedule for burner Courses

A NEW SCHEDULE for the oilburner schools sponsored by the Oil Heat Institute of New England, Boston 15, Mass., has been announced. The first class will start January 5 at the auditorium of the Narragansett Electric Light Co., Melrose St., Providence, R. I., and then weekly for ten weeks.

Starting dates for other sessions are: January 6, Vasa Hall, 861 Main St., Brockton, Mass.; January 7, American Legion Building, 22 Beale St., Wollaston, Mass.; January 8, E. L. Kimball Co., 1256 Eastern Ave., Malden, Mass. and January 9, Y.M.-C.A. Building, Church St., Newton, Mass.

Ivan C. Sutherland, director of education for the Institute, is in charge of the program, with representatives from manufacturers furnishing lecturers for instruction at each of the ten sessions scheduled for this series.

Three class sessions are reserved for controls; two are set aside for low pressure oilburners, one on the Oil-O-Matic and the other on Winkler burners, with Timken wall flame oilburners the subject of the seventh session. Combustion testing equipment and its use and warm air duct design and installation are the topics discussed in the eighth and ninth session. The program is concluded with a presentation on the servicing of G-E oilheating equipment.

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THE SILENT GLOW Express Head OIL BURNER

Here, at last, is your completely successful answer to the problem of "pulsation" now so commonly encountered in compact, modern furnaces. "Express Head" represents an engineering achievement, unique in the annals of burning oil for home heating, which makes it possible to wring every drop of heat out of every drop of oil. Not a single B.T.U. is wasted, with a fire that is brisk and lively, yet far quieter than ever before attained in limited size combustion chambers.

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COMMERCIAL & INDUSTRIAL oilburning

Examination for big-burner Servicemen

Test Yourself and your Buddies for Know-How in the commercial-industrial Field!

by
J. W. Schulz

WELL-QUALIFIED OILBURNER servicemen are crazy about taking examinations! The feature article, "Exam for Servicemen," which appeared in the April, 1952, issue of FUELOIL & OIL HEAT brought in hundreds of letters from servicemen who had taken the test in the article. Without exception, these servicemen liked the examination. It gave them a chance to prove they know how to solve everyday problems, plain and fancy, related to oilburner misbehavior. It permitted them to prove, also, that they are capable of giving good answers to technical questions often asked by burner owners.

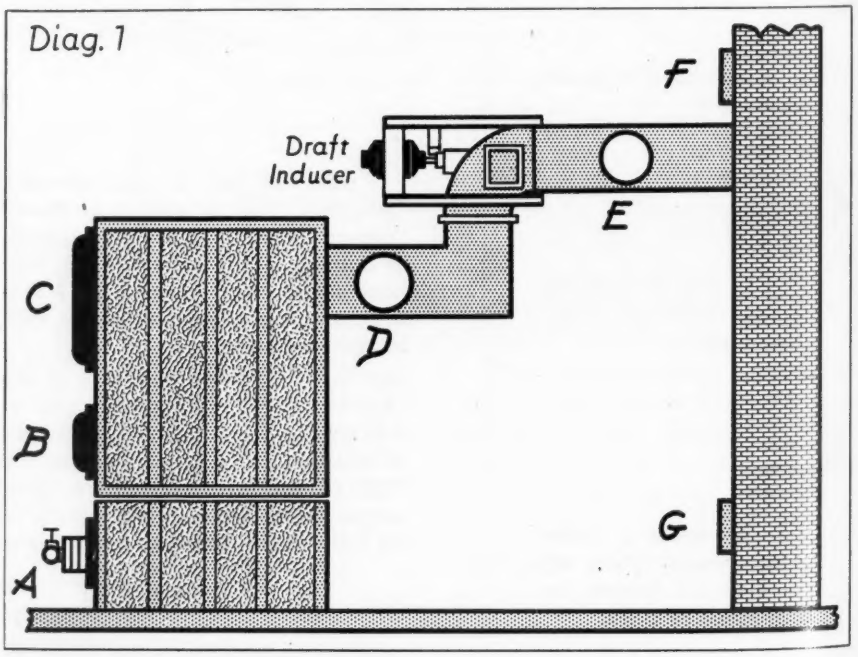
The appearance of the examination article in the April issue invited dealers and servicemen to send in their comments on whether or not servicemen should be licensed, for without arguing in favor of licensing it pointed out that in certain localities licensing of oilburner men is considered necessary in the interests of public safety — without the need for a man to qualify himself as an oilburner expert any ignoramus can go into the business of servicing oilburners and making them unsafe as he goes along. An untrained, unqualified serviceman can arrange a burner for uncertain ignition, shunt or disconnect safety controls that he considers unnecessary or troublesome, eliminate the protection given by fuses and overload devices, and leave oilfired boilers and hot water tanks in a condition to explode if-and-when excessive pressures or temperatures develop in them.

The mention of these matters in the April issue, though it was coupled to the statement that there are weighty arguments against licensing of servicemen, brought in dozens of letters emphatically in favor of compulsory licensing of every oilburner serviceman, but not a single letter opposed to such licensing! Those men who have been heard from on this subject are all in favor of licensing of service men. Don't overlook, however, that the poorly educated servicemen who do poorly at examinations are not likely to speak up, for fear of revealing their ignorance and incompetence. These men tremble in fear. Were licensing of servicemen to start in their localities, these men might fail to pass licensing examinations and thus lose their right to earn their livelihoods by working at servicing burners.

This article presents an examination for commercial-industrial oilburner experts, whereas the article in the April issue was for domestic oilburner experts. This new examination follows the pattern of the earlier exam, a pattern developed over years by the author and aimed primarily to be fair to men who never got through grade school, as well as to men who are college graduates. The selection method of answering questions is used entirely in this examination. That rules out the need for a man to have an extensive vocabulary to pass. It rules out knowledge of the precise meanings of words needed for answers. It rules out know-how on putting words together to form simple and complicated sentences.

Taking written examinations is becoming to the civilized, educated man. If you believe you have exceptional ability in the field of commercial-industrial oilburners, can you prove this by getting one of the highest marks when you take this examination in competition with other big-burner experts?

Many men who never started high school are excellent at oilburner service work, being careful, thorough, and conscientious, and having worked on burners for years. Some of these men shock the grammarian and philologist every time they open their mouths. They double the negative, split the



Fired *up to 160 gph, this new boiler is equipped with a draft inducer because it is hooked to a chimney suitable for a 200 hp boiler. Question 1 deals with adding a last-pass draft gage to this installation. Question 2 says the owner bought a barometric draft regulator for the job and wants you to install it properly.*

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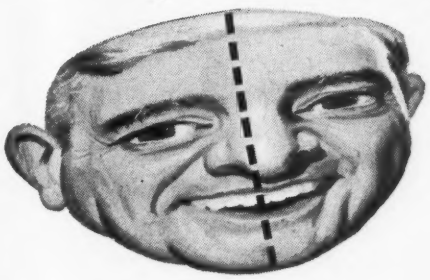
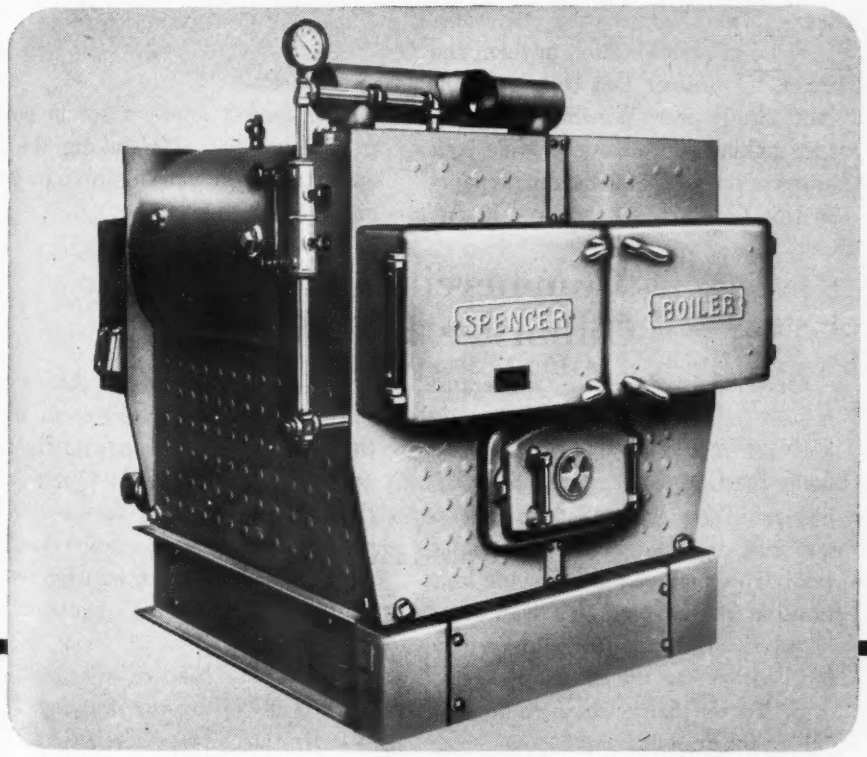
NEW DIVIDED LOW-WATERLINE BOILER!



We flattened it out to beat the headroom problem! Overall height is approximately 25% less than conventional firebox boilers.

We divided it in half to help you get it through narrow basement openings. The two watertight sections can be moved in separately, yet require no welding for installation and assembly.



The new Spencer Divided Low-Waterline Boiler is available in a range of sizes from 3,500 to 42,500 square feet, steam. Working pressures are 15 pounds steam and 30 pounds water. Also available for working water pressures up to 100 pounds.

Fast-steaming through the use of staggered rows of fire tubes. **Self-cleaning**—since water sides of heating surfaces are kept free of sediment. **Instantaneous or tank-type** service water-heating coils in a wide range of capacities. **Quickly convertible** from mechanical to hand-firing, whenever desired. **High firebox** for quiet and complete burning of fuels.

Only one of Spencer's complete line of boilers

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infinitive, and use "Aquastat," "Draft-O-Stat," "Draft-A-Justor" and "Teesdale" (for wall pump) as common nouns. Their usage of English should improve; that's for sure. But that's aside from the big point involved in giving such men an examination.

A licensing examination or similar examination should not pass on an oilburner man's ability to pass out the King's English, it should be aimed straight in the direction of determining which men will use only safe and reasonably good methods in servicing oilburners. That's why the selection method of answering questions is used throughout the following examination.

Although you do not need excellent ability writing out answers to pass this examination, you do need the ability to understand the questions and possible answers. If you do not pass this exam, don't offer the excuse that you could not understand the questions. In the first place, the men who take this examination and pass it prove the questions can be understood. In the second place, you should not be servicing oilburners in an English-speaking country if you can't understand simple English—for if you can't understand English you can't understand the instructions that come with complicated commercial-industrial oilburner equipment and which must be understood to install, adjust, and service the equipment properly.

If you don't know the details of draft, your knowledge of horizontal rotary cup burners and nozzle-type industrial burners is incomplete. Many big burners obtain at least 80% of their combustion air by natural draft. Their proper operation depends on the draft developed by a chimney—or a draft inducer.

You may not be able to pass this examination if you work mainly on pressure burners and in addition service only half a dozen horizontal rotary jobs that you know from A-to-Z. You don't have to know much about commercial-industrial burners to service a few horizontal rotary jobs properly. But to be an expert in the commercial-industrial burner field you must know much about such things as electronic controls, big-boiler fireboxes, instrumentation for industrial jobs, draft inducers, heating and pumping of heaviest fueloil on largest jobs, and low-fire starts.

The commercial-industrial burner expert knows much about combustion controls, sequence-type draft controls, over-fire draft controls, and heat controls for large buildings. These are things you don't need to know to take care of a few ordinary horizontal rotary cup burners, heating small factories or apartment houses. This exam aims to be tough. To pass it, you've got to know more than you need to know to service a few ordinary horizontal rotary jobs.

Here are the instructions for taking the following examination:

1. Read each question in turn, and check the answer you believe is correct. Study every possible answer before making your decision. Note your answers on a separate sheet of paper in this fashion: "Question #1, A," "Question #2, C," etc. Or if you want to mark the magazine pages, simply encircle the "A," "B," "C," or "D" that appears before the possible answers.

2. You may not find an answer which is precisely correct to your way of thinking. In that case, mark as correct the listed possible answer that you believe is most nearly correct.

3. Don't mark more than one possible answer as correct. Marking two or more answers as correct gives you zero for the question.

4. If you want to, change your answer after you first mark your answer. But label your final answer clearly as "Final Answer" to avoid confusion.

5. Answer every question. Take up to one hour's time, no more time. Any questions not answered within one hour are counted zero.

6. Each correct answer scores 4%. A total lower than 76% fails the examination.

The correct answers are given on p. 142, so that after taking the examination you can figure out your mark.

Commercial-Industrial Oilburner Examination

Question 1—See Diag. 1. Because it was connected to a chimney suitable for a 200 hp boiler, this new boiler fired up to 160 gph, has a draft inducer. You are told to connect a last-pass draft gage to this installation. To which of the following locations would you pipe this draft gage?

A. To the oilburner air intake labelled "A" in the drawing.

B. To the flame observation door, "B" in the drawing.

C. To the flue clean-out door, "C" in the drawing.

D. To the part of the smoke breeching between the boiler and the draft inducer, labelled "D" in the drawing.

E. To the smoke breeching that runs from the draft inducer to the chimney, "E" in the drawing.

Question 2 — See Diag. I. The owner of this installation bought a conventional draft regulator of the swinging-disc or swinging-gate type (excessive draft causes the disc or gate to open and admit boiler-room air to the breeching or chimney). He tells you to install it. As in Question 1, the chimney suitable for a 200 hp boiler is now serving a boiler fired up to 160 gph. At which location would you install the draft regulator the owner bought?

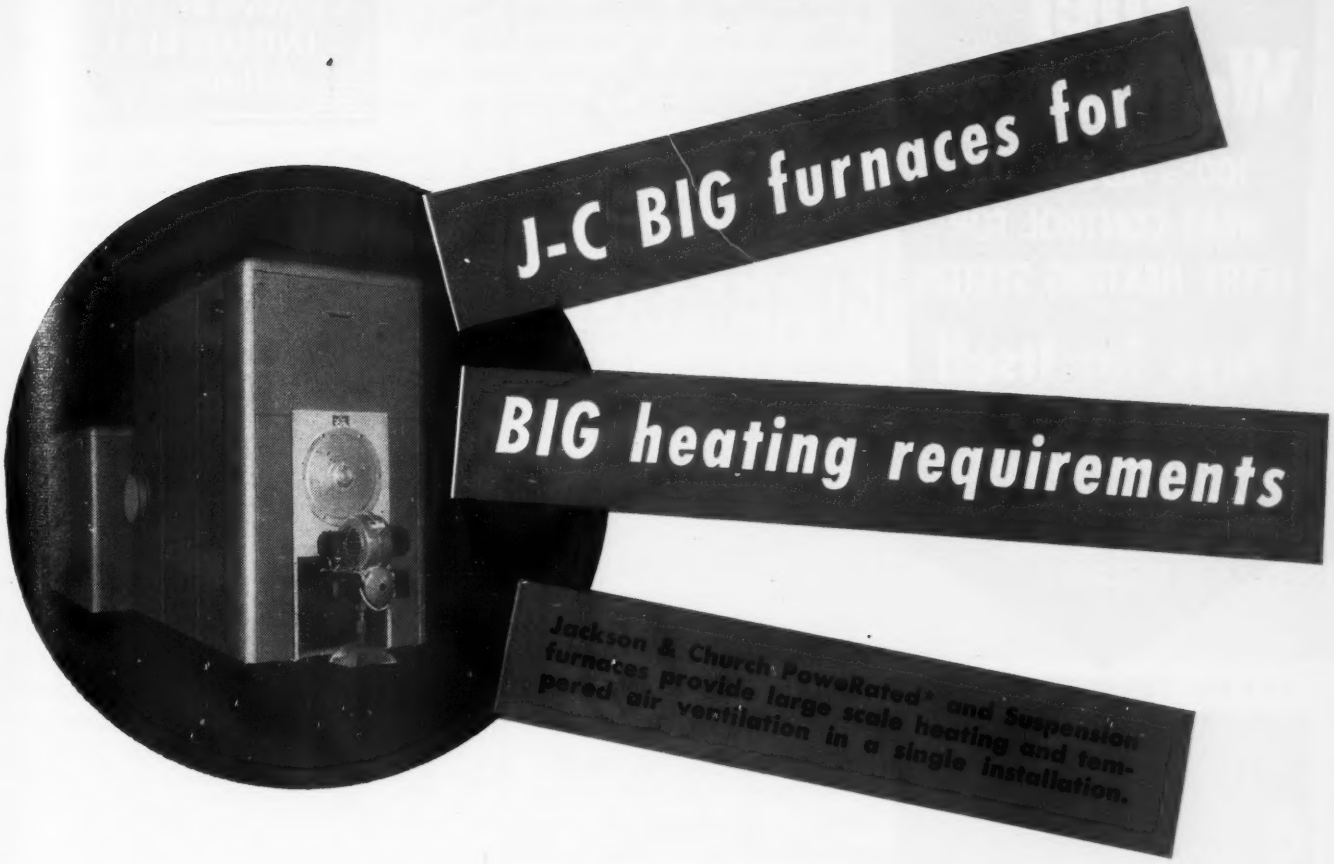
A. At the base of the chimney, marked as "G" in the drawing.

B. In the chimney above the smoke-pipe connection, marked as "F" in the drawing.

C. In the smoke breeching between the draft inducer and the chimney, at point "E" in the drawing.

D. In the smoke breeching between the boiler and the draft inducer, at point "D" in the drawing.

Question 3 — See Diag. 2. The commercial-size gun burner controlled by this panel and wiring works all right, according to the owner. He is especially proud of his two pressure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Jackson & Church PoweRated* and Suspension furnaces provide large scale heating and tempered air ventilation in a single installation.

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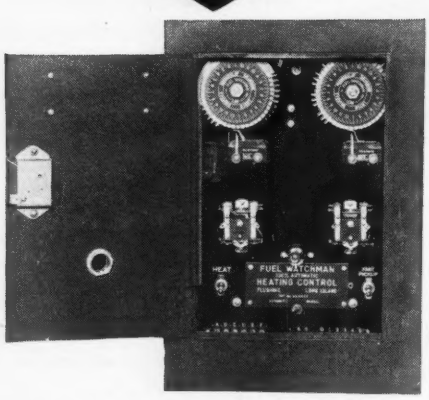

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controls, wired in the low-voltage thermostat circuit. If one fails to stop the burner, he points out, the other will. Which of the following points is correct regarding these two pressure controls?

A. They are installed and wired properly according to this drawing, and one simply should be set higher than the other to remain in reserve for ultimate safety.

B. No matter how many pressure controls you have on a job, it's wrong to connect one of them in the low-voltage thermostat circuit.

C. A line-voltage pressure control should be wired in series with the on-off main switch shown in the drawing, and should be at the load side of this switch.

D. A pressure control, along with the low-water control and the main switch, should be in the live line to terminal No. 1 of the burner control panel.

Question 4—A factory used 2,000 tons of coal a year. Converted to the efficient use of No. 6 oil, it might use per year:

A. 275,000 gallons of oil.

B. 115,000 gallons of oil.

C. Less than 75,000 gallons of oil.

D. More than 400,000 gallons.

COMMERCIAL & INDUSTRIAL oilburning

An examination like this one should include points on safety in starting up and operating steam boilers, small and large, and low-pressure and high-pressure. It is difficult, however, to draw up questions and possible answers regarding the importance of proper-size, proper-type safety relief valves—low-water protection—proper cleaning of new steam boilers—the need to treat boiler water using chemicals—and how to insure long life for boiler tubes.

Question 5—A piston-type steam-driven fueloil pump is drawing No. 6 oil into a hospital boiler room from a tank buried outside. A suitable temperature for the oil entering the pump is:

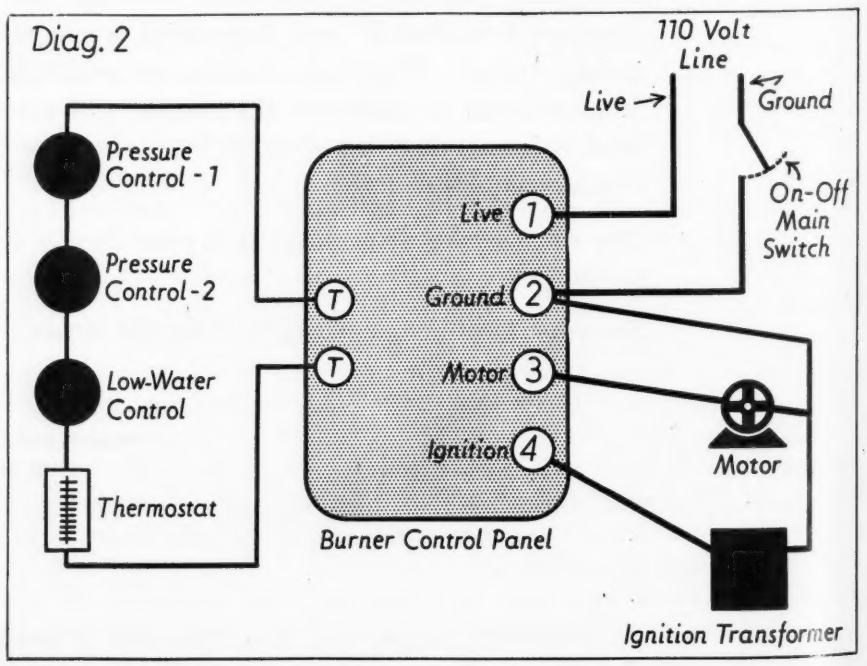
A. Above 300°F.

B. Between zero and 40°F.

C. Between 40°F. and 70°F.

D. Between 70°F. and 135°F.

Question 6 — Typical horizontal rotary cup burners, employing direct-drive for their blower wheels and atomizing cups and using 60-cycle

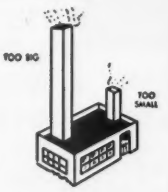


Question 2 *of the exam deals with this control wiring, which the owner is downright proud of. Works swell, he says, and has the special feature of two steam pressure controls, one safeguarding against failure of the other. If you've any questions about this, assume that the gun-type oilburner has a one-quarter horsepower, repulsion-induction motor.*

SIX CAUSES OF POOR CHIMNEY DRAFT

1. COLD STACK GIVES NO DRAFT

When chimney has become chilled, furnace has no draft when it is started up.

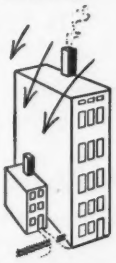


2. WRONG SIZE CHIMNEY

Boilers of different sizes need chimneys of different sizes.

3. TOPOGRAPHY AND WIND COMPLICATIONS

Chimneys near mountains or cliffs give reverse draft when wind is wrong way.

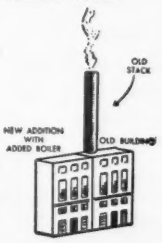


4. TALL BUILDING NEARBY GIVES DOWN DRAFT

The same thing happens when a chimney is blanketed by a large building nearby.

5. AIRFIELD OR OVERHEAD HIGH TENSION WIRES

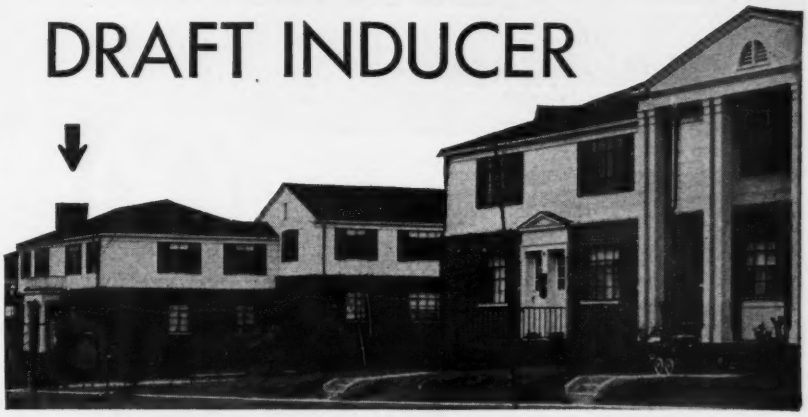
Chimneys must be low near airfields or under high tension wires.



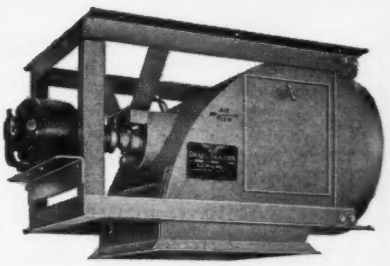
6. BOILER CAPACITY INCREASED

Where boiler capacity is increased with same stack, draft inducers must be installed to insure adequate draft.

Motorized Chimney Draft with the WING DRAFT INDUCER



SOLVES THE PROBLEM OF ADEQUATE DRAFT REGARDLESS OF WIND, WEATHER OR LOCATION AND WITHOUT TALL, UNSIGHTLY, COSTLY STACKS



NOW you need not worry about draft difficulties. The WING Draft Inducer permits operating at high efficiencies without regard to weather conditions. Thorough and complete combustion is assured with high CO_2 content. Smoke is reduced or eliminated. Fuel costs are cut. Learn the facts about motorized chimney draft. Use the coupon.

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Please send me a copy of the reprint "Motorized Chimney Draft" together with a copy of your bulletin "Wing Draft Inducer".

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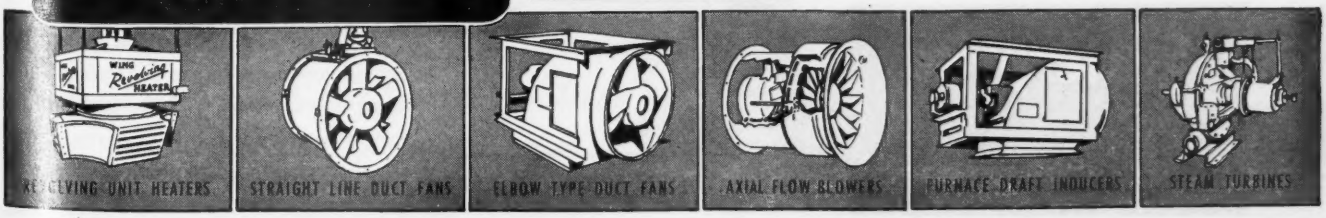
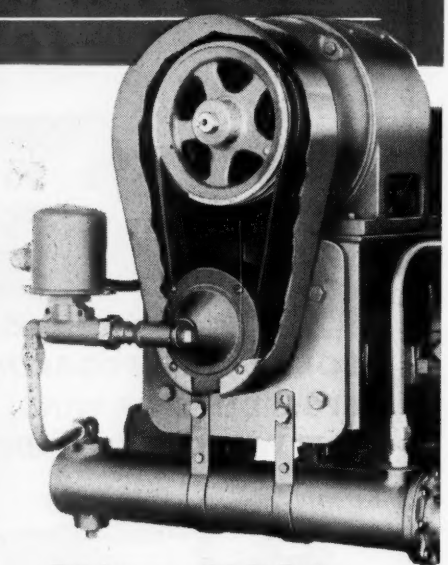


DEVELOPMENT REPORT

V-Belt Drive—standard on all Enterprise Burners for easy, low-cost motor change and maintenance



WHY ENTERPRISE USES V-BELT DRIVE EXCLUSIVELY!

- Enterprise pioneered V-Belt Horizontal Rotary Oil Burners. Both direct drive and V-Belt were produced for several years.
- In 1938 an extensive survey of both distributors and users indicated an almost universal preference for V-Belt drive.
- For 14 years V-Belt drive has been used *exclusively* on all Enterprise Oil and Combination Oil-Gas Burners... for these reasons—

Enterprise Burner capacities range from 4 to 200 gallons per hour, 12 to 650 boiler hp.

Efficiency—with V-Belts
Any desired operating speed can be provided to produce fine atomization of any type of fuel. Direct drive burners have only one speed.

Flexibility—with V-Belts
The capacity of Enterprise Burners can be increased or decreased simply by changing motor size and sheaves. Extra capacity in direct drive burners can only be obtained in a larger burner size.

Economy—with V-Belts
Standard motors (1) incorporate the most efficient design and construction; (2) are available throughout the world; (3) cost less than component parts of special direct drive motors; (4) require less time to replace, thereby reducing replacement cost.

It will pay you to look at this and other features that make ENTERPRIZE the *Quality Line* of Horizontal Rotary Oil Burners! Write today for full information.

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Enterprise DEPENDABLE Oil Burners

GENERAL METALS

The Choice of Heating Experts

COMMERCIAL & INDUSTRIAL oilburning

current, have motor-shaft speeds of about:

A. 1150 rpm.

B. 1725 rpm.

C. 3450 rpm.

D. Between 5,000 and 10,000 rpm.

Question 7—On oilburner installations Nos. 5 and 6 fueloils often are handled by low-speed oil pumps driven by belt or worm-gear reduction drives. The pumps run at low speeds because:

A. Usual electric motor-shaft speeds are unsatisfactory for heavy fueloils, particularly when these oils are cold.

B. Higher oil pressures can be developed by slow-speed pumps than by high-speed pumps.

C. When heated considerably and therefore thin, the heavy fueloils cannot be handled by high-speed oil pumps.

D. Slow-speed pumps are best for extremely volatile petroleum products like gasoline, kerosene, and hot fueloils.

Question 8—You are asked by a factory owner if No. 6 oil contains the same amount of heat per gallon as No. 2 oil. Mark the answer you would give:

A. No. 6 oil contains about 10% less heat per gallon than No. 2 oil, but the lower price of No. 6 oil makes that unimportant.

B. No. There's more heat in No. 6 oil, about 10% more heat per gallon.

. . . . . .

In taking this examination, don't forget for a moment point #2 of the instructions. It is highly important, so here it is again: You may not find an answer which is precisely correct to your way of thinking. In that case, mark as correct the listed possible answer that you believe is most nearly correct.

Difference in opinion may make the world go round, but in the eyes of most experts only one of these possible answers is supposed to be correct, and all the other possible answers are supposed to be dead-wrong.

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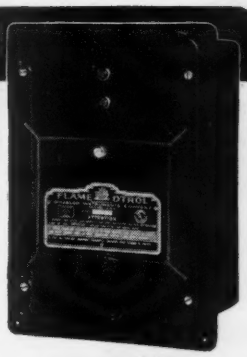
INSTANT SWITCHING ACTION with

wheelco flame-otrol



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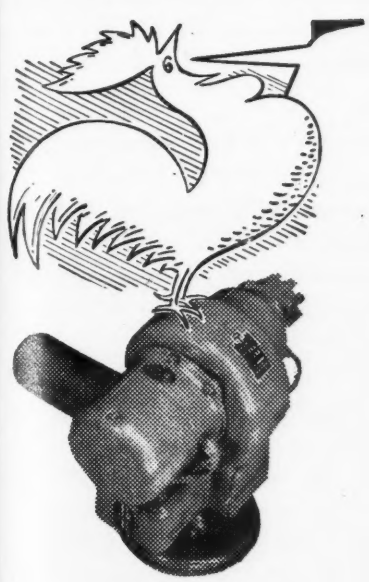

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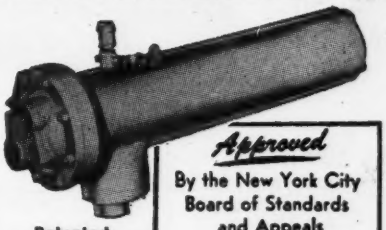
A COMPLETE *Line* of FUEL OIL *Pre-Heaters* FOR USE WITH NO. 6 (BUNKER "C") *Fuel Oil*

THE *YULA-TROL* RELAY BOX with LIGHTS, ALARM and DETECTOR.

Yula preheaters for fuel oil are designed for greatest efficiency and low cost. Every unit is pre-tested at the factory to insure accurate performance on installation. Yula makes a type for EVERY need!

The YULA-TROL Fuel Oil Detector and the YULA "YT" "U" Tube Fuel Oil Heater, containing an oil de-entrainment chamber and a specially designed probe, is approved by the New York City Board of Standards and Appeals as a complete unit. It also functions as a low water cut-off. The safety device that almost talks! If an oil leak occurs, it shuts off the burner, rings the gong, turns on the red light. This occurs in just 45 seconds after an oil break. It's the ONLY device that gives super safety and top efficiency! Every feature you need for ECONOMICAL oil heating!



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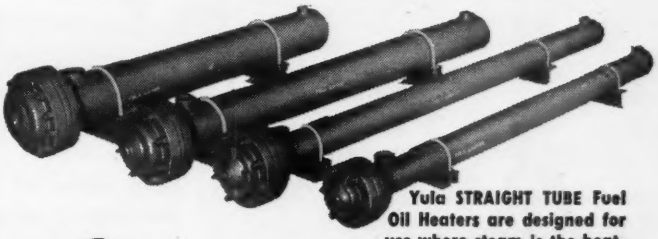

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TANK SUCTION TYPE (Steam or Hot Water)

"PARAPROBE"* Fuel Oil Heater (For Below-The-Water-Line Service) — Guards against oil leaks and automatically shuts down oil burner and pump in event of oil heater failure. A positive protection against oil in the boiler.

TYPE "GF"* Indirect Gas Fired Fuel Oil Heater — Generates its own supply of steam for heating the oil! Applicable to any type of oil fired apparatus. A radically new development!

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COMMERCIAL & INDUSTRIAL oilburning

C. Yes. Nos. 2 and 6 oils contain equal amounts of heat on a per-gallon basis.

D. Different deliveries of fueloils are greatly different, depending on the oil fields and refining methods involved. Therefore you may get a load of No. 6 oil that contains 35% more heat than a certain load of No. 2 oil, or you may get a load of No. 2 oil that contains 35% more heat (all on a per-gallon basis, of course) than a certain load of No. 6 oil.

Question 9—On certain industrial installations, fueloil is heated to 230°F. or even higher temperatures. This method usually is used:

A. The oil is heated by under-the-waterline heaters installed on high-pressure steam boilers.

B. The oil is heated by steam-type heaters which receive steam from high-pressure steam boilers.

C. First, ordinary steam-type or hot-water type fueloil heaters raise the oil temperature as much as possible, then electric oil heaters are used as boosters.

D. Separate small boilers of the hot water type are used just for heating the fueloil to 230°F. or higher temperatures.

. . . . . .

If some of the possible answers listed here appear absurd, consider this. This exam was field-tested with the help of men now working at servicing big burners. Not one of these 101 possible answers was considered absurd by all of the men who helped us.

. . . . . .

Question 10—Draft inducers, consisting of big fans or blowers that draw products of combustion from boilers, are being used more and more for commercial and industrial oilfired boilers. Which of the following might be the reason for installing a draft inducer?

A. Greater over-fire draft is needed than the chimney on the job can provide; you need more draft.

Factory and Boiler House
NU-TONE CHIMES CORPORATION
Cincinnati, Ohio
J. & E. WARM CO.
Builders and Contractors
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Modern Factories Need the *EXTRA STEAMABILITY* of

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STEEL BOILERS

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While this modern construction provides better light and a smoother flow of materials through production lines it steps up steam requirements.

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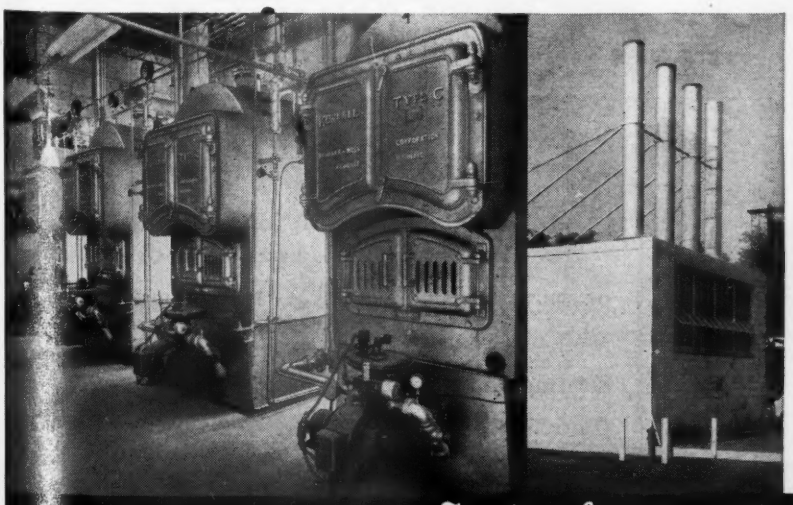

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B. The burners are undersize, cannot possibly spray oil at a high enough firing rate, therefore need boosting.

C. Undersize heating plant; because the boiler and radiation are undersize, the building can't be heated properly on coldest mornings.

D. Suction line leaks have been causing the flames to go out, and there have been mild explosions as the result of flame failure followed by relighting by hot fireboxes. Installing a draft inducer ends the flame-failure trouble.

Question 11—A big cast-iron steam heating boiler, fired by a 45 gph burner using No. 5 oil, gives clean burning together with combustion test readings of 950°F. stack temperature, 12% CO_2, and .12" over-fire draft. Continuous operation of the burner for five hours raises only one-quarter-pound steam pressure on the boiler and leaves many radiators cold. Which of these items might be the trouble?

A. Oilburner is undersize for firing this boiler and load.

B. The flame needs more air.

C. The fueloil needs additional heating to improve the atomization and combustion efficiency.

D. The boiler is undersize.

Question 12—You can use the following instruments to ascertain if the quality of combustion is improved on a job using No. 6 oil by increasing the oil temperature from 160° to 175°:

A. A stack thermometer.

B. A suction-line vacuum gage.

C. A CO^2 analyzer together with a smoke-checking instrument.

D. A draft gage to read the over-fire and smoke-outlet draft of the boiler.

Question 13 — A three-wire polyphase motor, 5 hp size and used to drive an oil pump, is started for the first time and runs in the wrong direction. It can be reversed by:

A. Obtaining special equipment, a starter or autotransformer or capacitor, to reverse the motor.

These questions are similar to those prepared by FUELOIL & OIL HEAT *for a certain city which started issuing licenses to (a) domestic oilburner servicemen and (b) commercial-industrial oilburner servicemen. The answers given here are different from those of this licensing examination to avoid distributing in that city the answers to its commercial-industrial examination.*

After all, a commercial-industrial burner expert should have a good idea regarding how many gallons of oil might equal one ton of coal, and the boiler horsepower equivalent of firing one gallon of oil per hour!

. . . . . .

B. Disconnecting and switching any two of the three wires that give current to the motor.

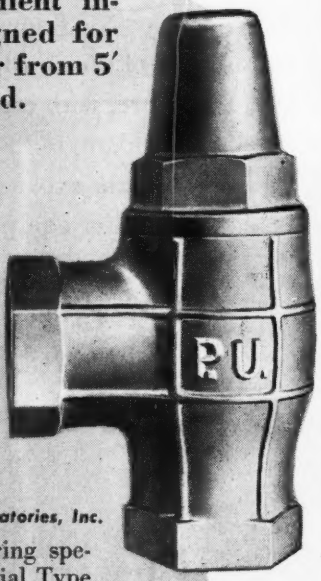
C. Having internal connections of the motor altered by a big-motor specialist.

D. Removing the rotor and turning it end-for-end in the motor.

Question 14—Slight chimney smoke and too-frequent need to clean boiler flues can be caused by:

PREFERRED INDUSTRIAL
Anti-Syphon Valves
900 gallons per hour even with No. 6 oil...!

Angle type construction for convenient installation designed for heads up to 5′ or from 5′ to 10′ as required.



Preferred Industrial Anti-Syphon Valves can do the job better because they are designed better. A complete line of valves for pipe sizes of 1¼", 1½", 2", 2½" and 3" For use with all grades of fuel oil (including No. 6) and maximum capacity of 900 gallons per hour.

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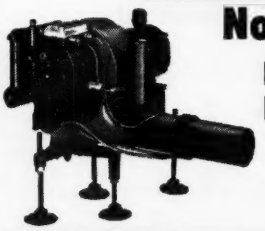

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A. Heating heavy oil just five or ten degrees hotter than is best for a horizontal rotary cup burner.

B. An oversize suction line that gives the pump too much oil and makes the fire oversize.

C. Poor atomization and impingement of oil spray on the firebox floor and sides.

D. Need for higher pressure at the pump outlet of a rotary cup burner, to improve atomization.

Question 15—The owner of a large low-pressure, gun-type burner, which according to its manufacturer should use No. 2 oil, is itching to use No. 6 oil. Which of these items is the proper advice for him?

A. Arrange for the burner to start on No. 2 oil, then after a few minutes have it switch automatically to No. 6 oil heated to at least 200°F.

B. First try a mixture of half-and-half No. 2 oil and No. 6 oil. Find out if that works.

.....

You say that the answers we list as correct are wrong? Then please send us a short note explaining your ideas. Your name and address may be published together with your explanation, so make it good!

.....

C. Don't use oil heavier than No. 2 fueloil in such a burner.

D. No. 4 or 5 oil heated to 150° is used regularly in gun-type burners designed for No. 2 oil.

Question 16—A gallon of No. 6 oil provides about this much heat, gross basis:

A. 240 Btu per gallon.

B. 12,000,000 Btu per gallon.

C. 150,000 Btu per gallon.

D. 1,100 Btu per gallon.

Question 17—This fairly efficient boiler now fired by coal works ten hours a day and produces an average output of 300 horsepower while it works. If it is converted to oil, how many gallons of heavy fueloil will it use during its ten-hour work-day?

A. 1,000 gallons.

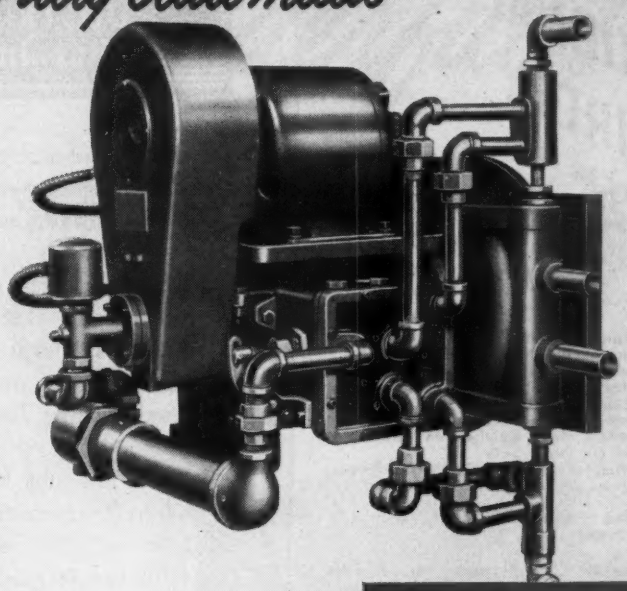
B. 200 to 300 gallons.

C. 3,000 gallons.

D. Over 5,000 gallons.

Question 18—Data on the amount of air needed per hour or per minute

Fully Automatic



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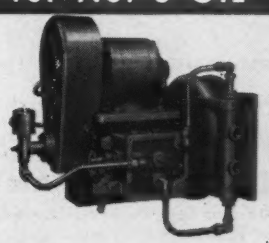
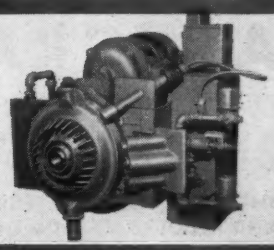


for No. 5 OIL



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- V-Belt Drive for the high cup speed essential to efficient atomization.
- Four-Hole Hinge circulates oil through oil heater so that hot oil is on the *pressure* side of the pump, allowing you to burn oil at higher temperatures.
- Adjustable Air Nozzle provides accurate control of flame contour.
- Dual Pumps and Reservoir combined with Constant Oil Rate Control provide controlled firing regardless of viscosity variation.
- Burn any grade of oil. Also available with combined gas burner for any type of gas.
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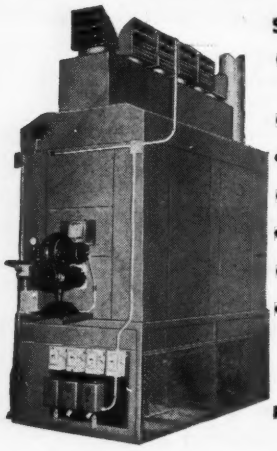

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COMMERCIAL & INDUSTRIAL oilburning

for an oil flame of a certain size often are needed in figuring sizes of forced-air blowers, draft inducers, and outside-air openings for big boiler rooms. To solve such problems you can figure roughly that to burn one gallon of No. 6 fueloil you need the following volume of air on a basis of 70° air temperature and atmospheric pressure:

A. 100 to 150 cubic feet.
B. 500 to 800 cubic feet.
C. 1,500 to 2,000 cubic feet.
D. 4,500 to 6,000 cubic feet.

Question 19—Supposed to be fired 35 gph by a rotary cup burner, this boiler can be fitted with a firebox as wide as 42". A narrower firebox may be installed. Which of the following is the approximate proper length for a firebox to be fired at 35 gph?

A. Six feet.
B. Three feet.
C. Ten feet.
D. Fifteen feet.

Question 20 — In sizing the secondary air ports of a horizontal rotary burner firebox, how much area should be provided for each gallon-per-hour to be fired?

A. Provide one-quarter square-inch of secondary air port and passage for each gph of the maximum firing rate you are figuring on.

B. Provide four to five square inches of area for each gph.

C. Provide two square feet of area for each gph.

D. Provide 80 to 100 square inches of area for each gph.

Question 21—Using 3,000 tons of coal yearly to heat a hospital, this engineer is considering switching to oil and wonders how much oil storage capacity he will need. He asks you approximately how many gallons of No. 5 oil he will use for heating during 15 days of typical January weather. Which of these amounts will you give as your answer?

A. About 40,000 to 50,000 gallons.
B. About 15,000 to 20,000 gallons.
C. About 5,000 to 10,000 gallons.
D. Less than 3,500 gallons.

Question 22—Electronic or other instant-acting or rapid-acting controls are used on modern industrial burner installations to shut off the flow of oil

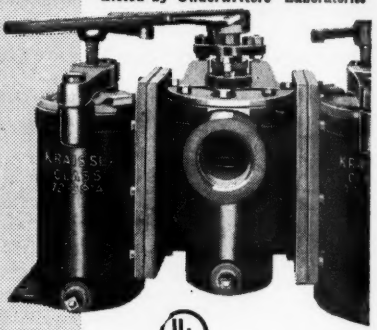
(*Please turn to page* 140)

. . . . . .

You certainly can draw up better answers to some of these questions than the possible answers listed here! In many instances, the best possible answer listed here is not too obviously correct. That's intentional. It makes the examination more difficult.

* SINCE 1926 * in the application, design and mfg. of pumps — separators — hydraulic accessories

KRAISSL
Simplex & Duplex SEPARATORS
Listed by Underwriters' Laboratories



STRAINERS • FILTERS • STANDARD AND HIGH PRESSURE

eliminate filter replacement costs and supply problem

Kraissl separators completely eliminate costly replacement of expendable-type filters—and reduce your critical supply problem. No tools needed to restore original efficiency within minutes — bronze wire-cloth basket is instantly and easily removed for cleaning, keeping maintenance costs to minimum.

Specify Kraissl separators on your next installation—design Kraissl economy into your own burners . . . for any practical degree of separation — from straining to filtration.

Complete range of sizes—from 1¼" to 6"; pressures to 500 psi. Cast-iron, bronze, steel, stainless-steel, aluminum, monel or special metals to your specifications.

Bulletin A-1214 gives full data—write for your copy today!

KRAISSL KRAISSL CO. Inc.
295 Williams Ave., Hackensack, N. J.

"Our Petro is wonderful!"

She is telling her friends about this thrifty new winter air conditioner

Model POH Highboy (illustrated) for closet and other installations with limited floor area. For low headroom applications the POL Lowboy is ideal.

THIS PETRO OWNER is heartily *endorsing you and your service.* For *you* sold her on Petro, and now that it's installed and doing a fine job — just as you said it would — she's most enthusiastic. This is what she's saying . . .

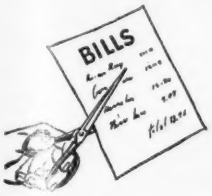
"wonderful for home comfort"

Yes, with a Petro winter air conditioner furnace Mrs. Homeowner and her family are enjoying the luxury of the most modern automatic heating. Air is warmed to just the temperature preferred, cleaned by filters and quietly circulated through the house.

"wonderful for convenience"

Owners can relax when their Petro automatic oil furnace does the heating job. They simply set the thermostat for the temperature they like and let Petro do the rest; no trips to the basement, no drafts to adjust, no fuel to handle.

"wonderful for heating economy"



Petro heat makes a hit with the budget-minded homeowner. The built-in Petro burner, with its balanced fuel-air ratio and tailored flame, burns *less* oil. And in addition it burns No. 2 or lighter oil, including the economical new catalytic oils. Furnaces are made of heavy-gauge steel, electrically welded into solid, permanent units. Long years of trouble-free, economical performance are built into every unit.

Write for full information on Petro Highboy and Lowboy Oil Furnaces. Ask also about Petro horizontal oil furnaces, oil boiler-burner units, and residential, commercial and industrial conversion oil burners. Address PETRO, 3170 West 106 St., Cleveland 11, Ohio.

PETRO
REG. U.S. PAT. OFF.

Automatic OIL HEATING

Cleveland 11, Ohio

MAKERS OF QUALITY HEATING AND POWER EQUIPMENT SINCE 1903

Industry Groups

Activities of local and national industry associations are reported monthly in this department. Secretaries are invited to send reports of their Group's activities to reach the editor by the 18th.

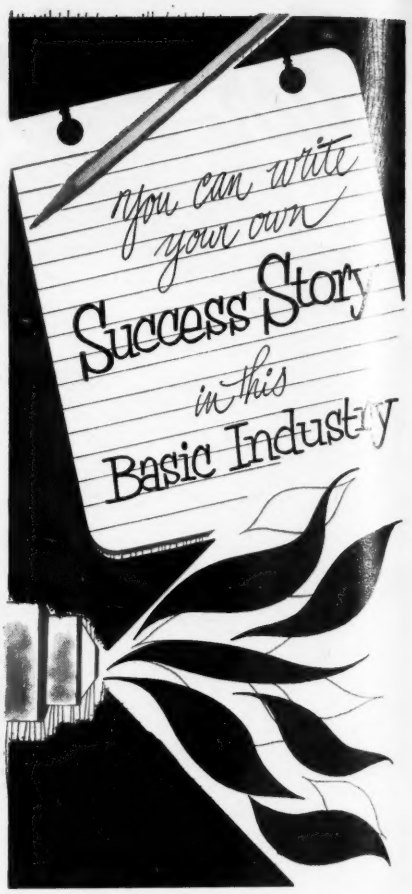
Merchandising Committee issues recruiting Booklet

"AN EXPANDING INDUSTRY will enable a young man to write his own success story," so states a new 12-page special brochure recently published by the OHI. Designed to stimulate and promote the recruiting of capable young men for the automatic oilheating industry, the two color booklet is expected to be given a wide distribution by the members of the Institute. Stressing the fact that the industry is young and growing with employment saturation low, offering good job security as well as many opportunities for advancement, it tells the full story of automatic oilheating as an opportunity and career field for young men.

Prepared by the Merchandising Committee, under the chairmanship of Claude Potts, the publication represents the first big gun fired in the new Recruiting - Training - Screening program designed to attract younger men to the job opportunities presented by the automatic oilheating industry. It is planned to distribute this booklet through OHI members, to vocational and business employment centers, public and private vocational schools, technical institutes and colleges as well as public and private vocational guidance groups. The RTS program will be implemented by the work of the Education Committee since both programs are complementary in nature.

The manpower needs of the industry are not being met by the present methods of recruiting and selection and the RTS program is projected to offset this situation by telling the story of the industry to the youth in the schools of the nation. This will be a help in filling the four to five thousand new jobs that open each year as a result of the industry's normal growth.

The brochure outlines seven major



OHI Recruiting Booklet

There's only 1 way!

TO KEEP FUEL OIL CUSTOMERS ... SATISFIED, INSTALL A GENERAL FUEL OIL FILTER

FOR PROTECTION OF FUEL OILS AND BURNER PARTS ... AND REAL PROFIT FOR YOU

GENERALS

- ELIMINATE CLOGGED NOZZLES AND BURNER PARTS, TRAP PARTICLES AS SMALL AS 5 MICRONS.
- ALLOW QUICK, EASY FELT CARTRIDGE REPLACEMENT — WITHOUT DISTURBING PIPING.
- CAN BE INSTALLED WITH A FEW SIMPLE HAND TOOLS AND JUST TWO PIPE CONNECTIONS.
- HAVE THE FINEST, ALL-WOOL FELT CARTRIDGES.
- HAVE STURDY INNER WIRE SCREEN TO BACK UP FELT AND PREVENT COLLAPSE.
- FIT ANY JOB . . . LARGE OR SMALL . . . HOME, BUSINESS, TRAILER, ETC.

Remember!

The few minutes you spend to install a GF is *profitable* time for years to come . . .

- Easy cartridge replacements each season.
- No more troublesome service "call-backs."
- Satisfied fuel oil customers year 'round.

CLEAN RIGHT SOOT REMOVER

cleans any heating system quickly, safely — leaves no residue. Manufactured for General Filters, Inc.

General Filters carry this Underwriters' Laboratories Seal

GENERAL FILTERS INCORPORATED

GENERAL FUEL OIL FILTERS

12890 WESTWOOD AVENUE
DETROIT 23, MICHIGAN

CANADIAN FACTORY BRANCH: CANADIAN GENERAL FILTERS, LTD., 2679 DANFORTH AVENUE, TORONTO 13, ONTARIO

Timken Silent Automatic Dealers can guarantee fuel oil savings in writing!

CAN YOU?

For more plus business from replacement sales... turn to

• Here's another exclusive advantage only Timken Silent Automatic Dealers enjoy: An *unlimited* replacement market! The efficiency of the famous Timken Silent Automatic Wall-Flame Oil Burner is so great that the salesman can justify replacement of *any* pressure burner, old or new, for *fuel savings alone*. With a twin-boiler demonstration he can prove that the wall-flame method saves up to 25% on fuel. Or, he can survey the present heating plant, according to a tried and proved Timken Silent Automatic plan, and then *guarantee those fuel savings in writing!* If you want more plus business that comes from replacement sales, it will pay you to sell the famous Timken Silent Automatic Wall-Flame Oil Burner, the basically different, basically better oil burner. Several choice territories are open now! Write today!

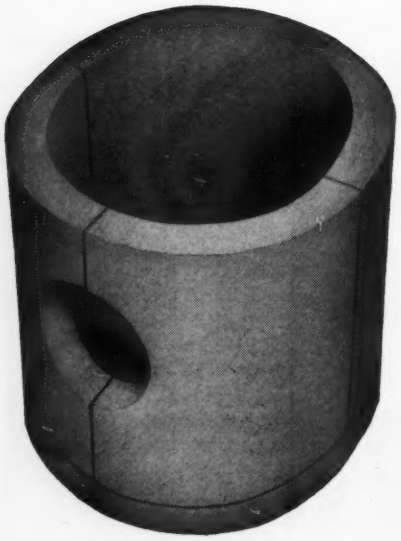
TIMKEN
Silent Automatic
HEAT
OIL · GAS · COAL
TIMKEN SILENT AUTOMATIC DIVISION
The Timken-Detroit Axle Company • Jackson, Michigan
The Timken-Detroit Axle Company of Canada, Ltd., Toronto, Ont.
The Accepted S A Standard
TRADE MARK REGISTERED

fields of opportunity for career and job seekers. These fields are: The residential equipment dealer, the industrial equipment dealer, heating contractor, equipment jobber, wholesaler, manufacturer and fueloil marketer. These seven fields represent a minimum total of fifty-seven occupational opportunities extending through sales, engineering, management, advertising, research, development, processing, transport, installation, service, and training as well as many others. The booklet also furnishes a "self analysis" questionnaire which the young man seeking an industry in which to settle, can use and thereby find where his capabilities may lie.

Companies and interested oilheating groups can obtain the 12-page brochure from the Oil Heat Institute of America, 6 East 39th St., NYC. The outside back cover has a space whereon company imprints can be placed. This space is directly under a statement asking the prospective employee to contact the named company.

The booklets can be purchased at $5.00 per hundred with the imprint for 300 copies costing $3.50 additional; 500 copies, $4.00 additional. When purchased in lots of ten thousand or more there is no additional charge for the imprint.

Do Your PRESENT PRECAST CHAMBERS Give You ALL these Advantages?



1. Low initial cost.
2. Low installation cost — only 5 pieces to assemble.
3. K-factor equal to insulating brick.
4. Excellent performance with either high or low pressure burners.
5. Scientifically packed to prevent breakage.

. . . if the answer is NO -- contact us NOW!

KOLB REFRACTORIES COMPANY Meadow & Jackson Sts. Philadelphia, Penna.

KolbKast Insulated Chambers

North Carolina Oil Jobbers complete plans for 1953

THE NORTH CAROLINA Oil Jobbers Association, Raleigh, N. C., has announced plans for its 1953 annual meeting and Spring and Fall conventions.

Its annual meeting will be held January 21 at The Carolina Hotel, Raleigh. This is a one-day closed session for jobbers and consignment distributors only. Directors and officers of the Association will be elected at this meeting.

The Jobbers group Spring convention will take place May 27 to 29 at The Carolina, Pinehurst. The banquet will be held Thursday night, May 28th and the Convention will close about 1:00 p. m., Friday, the 29th. Ladies are invited.

The Fall convention will be held on board the "Queen of Bermuda" as part of a five-day cruise out of Norfolk, Va. to Bermuda and return. They will leave Norfolk about 3:00 p.m. on Saturday, October 25. The ship will sail from New York at about 10:00 p.m. the night before and can be boarded at this port. The cruise will be available to wives, children and friends outside the industry. The boat has a capacity of 750 passengers and the fares, including staterooms and meals range from $135 to $400 from Norfolk, with about $20 additional for those boarding at New York. The fare for children under 12 accompanied by both parents will be $67.50.

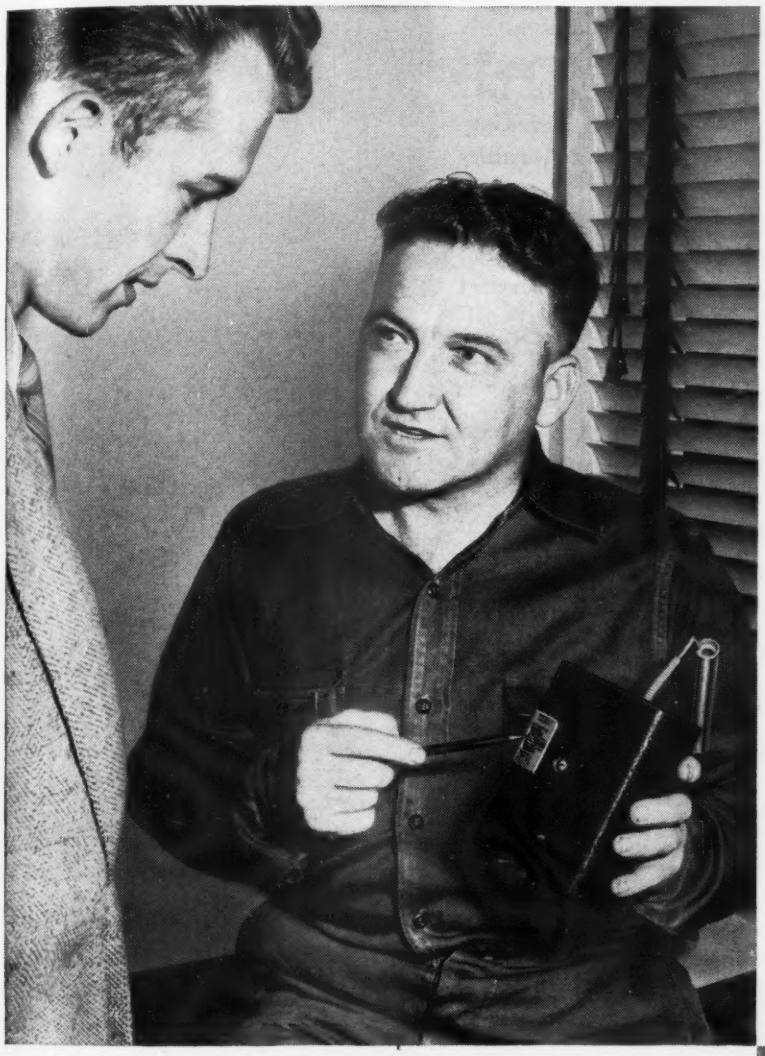
Nebraska Petroleum Marketers hold annual meeting in Omaha

E. H. LOHR, Lohr Petroleum Co., Columbus, Nebr., was re-elected president, Nebraska Petroleum Marketers, at its 32d annual meeting held November 5 at the Paxton Hotel, Omaha.

Fred K. Evans, Arspahoe, was re-elected first vice-president. Glenn D. Martin, Falls City, was named second vice-president.

"It's going to save me a lot of those $5 service calls"

—says dealer Keith Bickle, Denver, about the new Honeywell Flexible Element Furnace Control



Keith Bickle, right, owner of Supreme Heating & Ventilating, pictured with Honeywell sales engineer Bob Forster

"I first tried the Honeywell Combination Furnace Control on the recommendation of my supplier—and it worked out beautifully.

"You see, I figure it costs me about five dollars every time I go out on a service call. The L486 will *eliminate* a lot of those calls. And over a year's time, that's going to save me money.

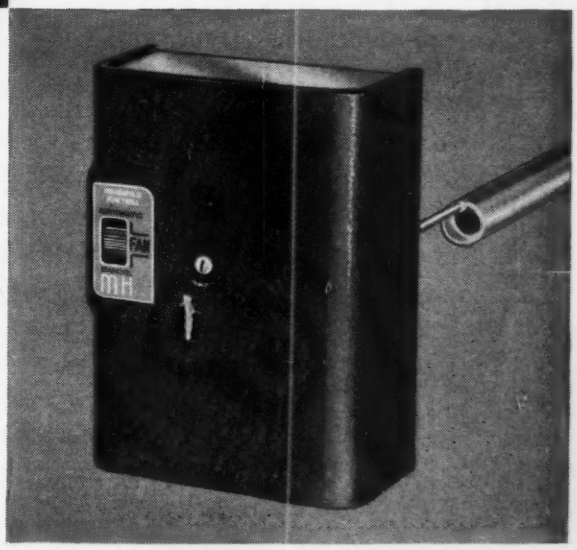
"Honeywell did a masterful engineering job on this control. It's not only better—it's *far better* than anything else like it on the market. It's the first combination furnace control I have ever used that is absolutely *fail safe;* that will give my customers 100% protection while eliminating any danger of fire hazard.

"That new snap-switch makes the mounting job a lot easier, too. Installation time is cut way down, an important factor in view of today's high cost of labor.

"I've already asked my supplier about getting my new equipment through with the L486 already on it—as *original* equipment."

H HONEYWELL

Another Plus-Profit Product from Honeywell



Give your jobs positive protection! Specify the Honeywell "L486"

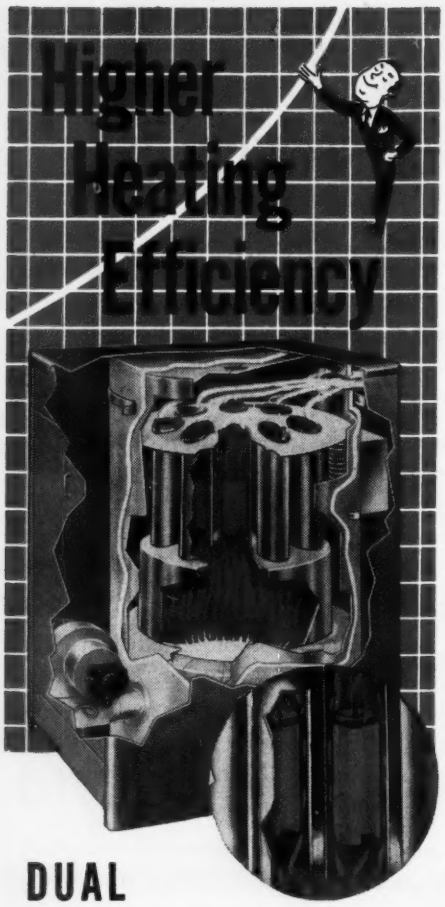
The new Honeywell *Flexible Element Furnace Control* gives your jobs 100% protection all the time. If sensing element ruptures, it breaks burner circuit and starts fan—it's *fail safe.*

Can be mounted inside or outside furnace casing. Snap-switch makes mounting in any position possible. Has easily accessible summer-winter switch. "Out-of-top" model also available. For full facts call the Honeywell office nearest you; or write Honeywell, Dept. FH-12-219, Minneapolis 8, Minn.

MINNEAPOLIS **Honeywell**

First in Controls

fueloil & oilheat



DUAL ECONOMY

STAINLESS STEEL INTENSIFIER TUBES

Installation economy for you **because the Dual 8 is easy to install and service: the cabinet is installed after all piping is completed; all controls are on the front of the boiler; the intensifier tubes are readily accessible.** ***Economy for homeowners*** **because they get faster heat with less fuel: the intensifier tubes see to that by cutting chimney heat loss and speeding heat transfer. Then add A. S. M. E. Code Construction and contagious customer satisfaction ...that's a recipe for more sales and more profit.**

Write for new folder: 1033 New Britain Ave., West Hartford, Conn.

*U. S. PAT. NO. 2,560,275

Acme DUAL 8 BOILER BURNER UNITS

ACME HEATING DIVISION

THE UNITED TOOL and DIE CO.

Jobbers elected to the board of directors include: Ralph W. Swanson, Omaha; Carl W. Mueller, Columbus; Clayton Peterson, St. Paul and Don Clarke, Hastings.

Fifteen resolutions were adopted by the group, including: Among the 15 were the following:

"We urge the establishment of a bi-partisan Highway Commission.

"We favor the re-enactment of the law (passed unanimously by the 1951 legislature and vetoed by the Governor) which imposed severe penalties for truck overloads.

"We urge the 1953 legislature to raise the limit of capacity of tank trucks required to obtain Transport Permits from 900 gallons to 2000 gallons because vehicles of less than 2000 gallon capacities are not used in 'over-the-road' or transport service."

The speakers included in the program were L. T. White, manager of business research and education, Cities Service Oil Companies.

Wisconsin OHA holds elections; Alfred Hegeman new President

ALFRED HEGEMAN was elected president, Wisconsin Oil Heat Association, Milwaukee 2, Wisc., at the Association's regular monthly meeting held November 20 at the Hotel Wisconsin.

Elected vice-presidents were Emery McNeil and Charles Stoffel. John Wiler was voted secretary.

Named directors for three-year terms were Robert Schultz, Laverne Schaetzel and John G. Eagle. Named director for a one-year term was Pirie Benson. Directors not up for re-election include Carter Wells, Julius Seiy and L. O. Woehrer.

Annual reports of officers and committee chairman were heard.

MOHA told of Pitfalls, cuts Possible in business Insurance

ALEXANDER ELLIS, of Fairfield-Ellis, Insurance Brokers, spoke on, "Cutting Insurance Costs and Better Coverage," before the Massachusetts Oil Heating Association, Quincy 69, Mass., at its regular monthly meeting held at the Hampton Court Hotel in Boston, November 18.

Ellis spoke on many unusual cases

SILENT STEEL SPLINES Will Not Nibble Out!

Pats. Pending

Replace spline couplings which have stripped out, loosened, or become noisy, with this heavy-gauge silent steel coupling. Guaranteed not to strip or loosen. Heavy-gauge steel prevents distortion.

Conventional set-screw couplings available in all lengths and bores.

MEMBER OHI

Our 25th Year

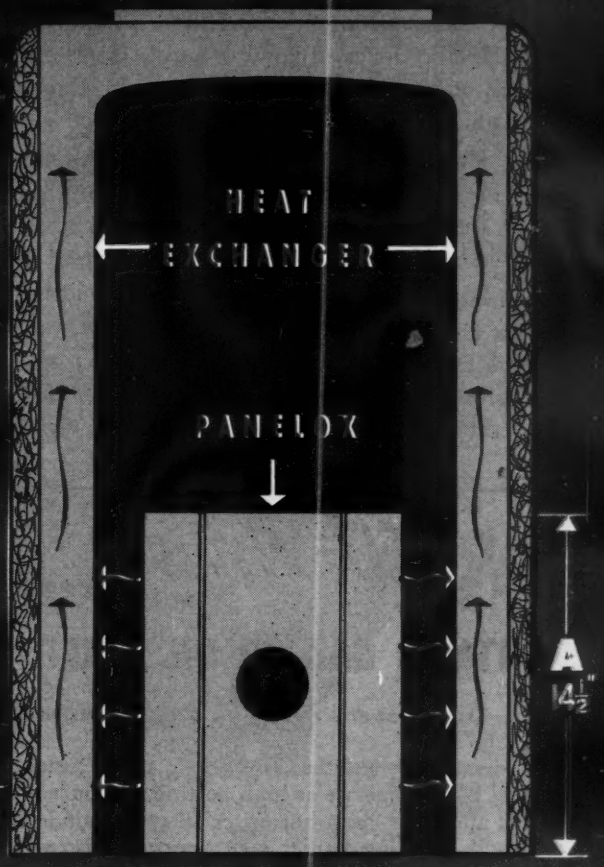
FLEXIBLE COUPLING MFG. CO.

8145 South Dobson Avenue
Chicago 19, Illinois

So much more
Heating Area

So much faster
Heat Transfer

So much better
Heating Performance

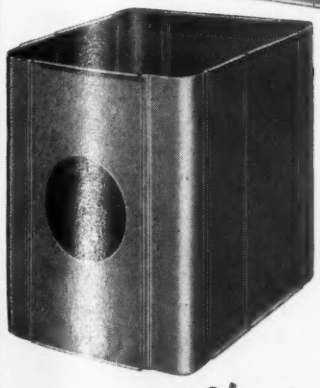


that's what you get

with this

HEAT-RESISTING STAINLESS STEEL COMBUSTION CHAMBER

PANELOX®



Count the advantages—and you'll know why more and more of America's leading manufacturers of oil fired furnaces are switching to PANELOX *Heat-Resisting Stainless Steel* Combustion Chambers!

MORE HEATING AREA—As shown in the diagram (A) the Panelox greatly increases the actual heating area of the heat exchanger—nearly double in some cases. That means *more* heat transferred and utilized—*less* heat up the chimney.

FASTER HEAT TRANSFER—Because there are no bricks to act as insulation, heat from the Panelox chamber is absorbed directly into the walls of the heat exchanger (see arrows). That means faster heat transfer—keeps the Panelox from exceeding 1200° to 1300°F. Heat exchanger wall will not get over 700°F.

BETTER HEATING PERFORMANCE—Heats up in seconds, for proper combustion almost instantly. Eliminates override, for greater comfort, better room temperature control. Provides quicker, cleaner, quieter heat, saves fuel.

No other combustion chamber offers you—or your customers—so much. Write—*now*—for full details, sizes and prices.

Check these features

- Interlocking panels slide together without tools.
- Absolutely no backfill, cement or insulation.
- No breakage in shipment or handling.
- Far less shipping weight than other types.
- Four thicknesses of metal at seams—provides extra strength and rigidity.
- Panels made in several sizes for easy fitting to a wide range of chamber dimensions.
- For round, square, rectangular or pear-shaped installations.

We have steel for immediate shipment of PANELOX Combustion Chambers

Stefco STEEL COMPANY •

Heating Equipment Div. • Michigan City, Ind.

he has experienced in connection with insurance claims arising in the oil industry. He also discussed how to cut insurance costs and pointed out the pitfalls which are faced in the oilheating industry.

Group insurance Plan adopted by Fuel Oil Distributors of N. J.

GROUP INSURANCE for the benefit of members and their employees of the Fuel Oil Distributors Association of New Jersey, Newark 2, N. J., was approved by the Board of Trustees of the Association at a special meeting. This plan will be underwritten by the Continental Assurance Co., Chicago, Ill. Date group insurance will become effective is January 1, 1953.

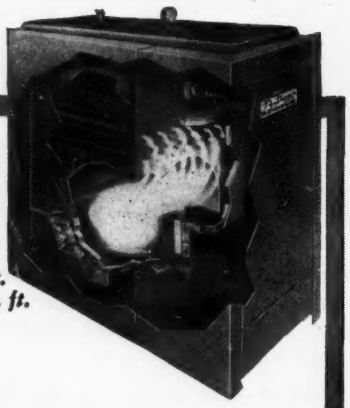
All firms who elect to join the program must insure all employees and executives on the payroll. All new employees are eligible on the date of their employment. Dependent's coverage is only available to those employees when a minimum of 75% of their employees with dependents elect to take this coverage. This insurance may be purchased with or without dependent coverage. If the company already has a group insurance program, the company may transfer this plan without any loss in coverage.

PROFIT-WISE heating contractors specify . . .

PORTMAR GAS OR OIL FIRED STEEL BOILERS

Meets every heating demand for steam or hot water

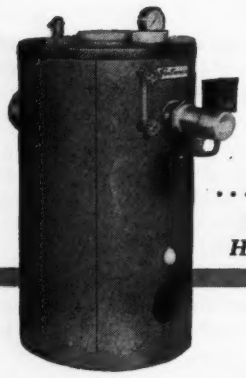
In-demand boilers that assure long range customer satisfaction, Portmar steel boilers operate at high heating efficiency—producing low cost heat and abundant clean hot water all year 'round. Priced "right" to meet a steadily growing market, contractors are discovering that Portmar boilers are *easier to install and amazingly trouble-free.*



WINDSOR STEEL BOILERS

horizontal tube series . . . with extended jackets

Steam: 320 to 3,000 sq. ft.
Hot Water: 510 to 4,800 sq. ft.



PORTMAR RESIDENTIAL STEEL BOILERS

vertical tube series . . . with flush or extended jackets

Steam: 320 to 1,100 sq. ft.
Hot Water: 510 to 1,760 sq. ft.

GUARANTEED PERFORMANCE ON EVERY JOB

- scientifically arranged heavy gauge steel, long life boiler tubes provides maximum heat transfer
- large furnace volume
- long gas travels permit complete absorbing of gases for high efficiency and economy
- attractively designed boiler jackets add beauty to basements
- large hot water tankless copper coil
- designed so that parts are easy to reach for proper cleaning
- tested with high hydrostatic pressure

Larger boilers made to order

Contact your jobber or write direct for literature and prices

"Engineered quality steel boilers for luxurious heating"

Portmar Boiler Company Inc.

193 SEVENTH STREET • BROOKLYN 15, N. Y.

RESIDENTIAL, COMMERCIAL, INDUSTRIAL WATER HEATERS AND HEATING BOILERS • PORTMAR STEEL BOILERS • ROTARY WALL FLAME BOILERS

R. Thompson named Chairman of NOJC at its annual Meeting

ROY J. THOMPSON, Chicago, Ill., now serving his third consecutive year as president, Illinois Petroleum Marketers Association, was elected chairman, National Oil Jobbers Council, during its annual meeting in Chicago, November 8 and 9. Thompson succeeds John Harper of New York, who held that post the past two years.

John H. White of Charleston, S. C., was re-elected vice-chairman and E. Keith Edwards of Springfield, secretary of the Illinois association, was chosen secretary of NOJC to succeed H. F. Horning of Minneapolis, secretary of the Northwest Petroleum Association.

Maryland OHA elect Officers; shows movies taken of Members

OIL HEAT ASSOCIATION OF MARYLAND, Baltimore 1, Md., held nominations and elections of officers at its regular meeting, November 18, at the Hotel Stafford.

Also on the program was the showing of a technicolor motion picture in which members of the Association took part. The film was sponsored through the courtesy of Socony-Vacuum Oil Co.

Change of Name decided upon by Air Conditioning Group

THE AIR CONDITIONING Blower Manufactures Association is the new name of the Furnace Blower Manufacturers Association, Cleveland 14, O. The change of name was decided upon at the Association's recent meeting in Cleveland, when the members requested that a name more suited to their broad field of business be chosen. They believed that air conditioning was a more inclusive term than furnace blowers and thus more descriptive of their activities.

Also at its Cleveland meeting, election of officers for the following year were held. The new president of the

Announcing WAYNE Model E ... OIL BURNER

- *New!* LOW COST, HI-QUALITY
- *New!* UNEXCELLED PERFORMANCE

FOR CONVERSIONS AND PACKAGE UNITS

CAPACITY .60 TO 3.0 GALLONS PER HOUR

NOW . . . one unit for 95+% of your sales! More profit with less inventory! .60 to 3.0 gal. capacity! Fewer parts for service!

PAT. PENDING

New!

NO-DRIP NOZZLE ADAPTER

Insures sharp oil cutoff when fuel pump shuts off. Prevents after-drip. Eliminates smoke, soot and carboning.

PAT. PENDING

New!

FOUR-IN-ONE AIR CONTROL

Easily sized on the job for measuring air from blower to air cone in exact amount needed for nozzle rating. Produces highest CO_2 for fuel economy and clean firing.

New!

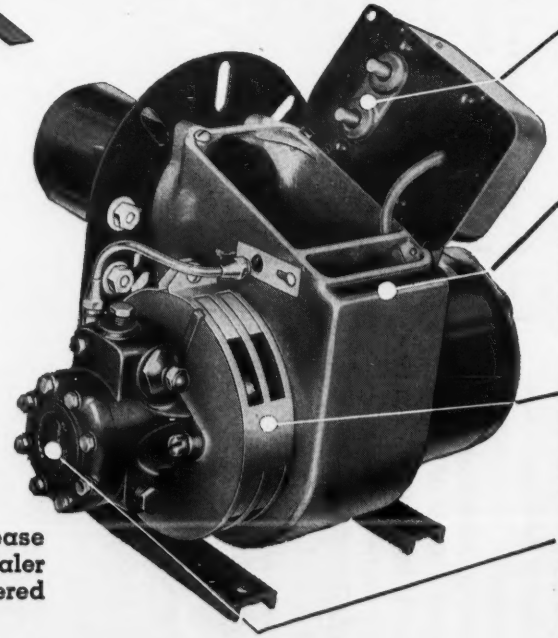
ONE-PIECE CAST AIR CONE

Maintains efficient stable flame pattern. Assembled to steel air tube with single set screw. Cast iron.

New!

AIR TUBE GUN ASSEMBLY

Removable in a few seconds for inspection. Speeds servicing. Cuts installation time. Reduces costs. Adds to profits.



POSITIVE IGNITION
High tension terminals contact bronze electrode springs. Contact breaks when transformer swings open.

CAST HOUSING
Cast aluminum fan housing maintains lifetime alignment of moving parts. No vibration. Quiet. Less wear. Junction box is built in.

CONTROLLED AIR
Multiple, interlocking air-adjusting bands increase air space 33 1/3 percent. Cadmium plated steel.

INSTANT FUELING
Nationally accepted fuel unit, transformer, motor and fan coupling for availability and customer satisfaction. No service problems.

JOBBERS-DEALERS!

Reduce your inventory . . . increase your profits . . . new jobber and dealer inquiries will be promptly answered . . . write today.

★ *WRITE FOR COMPLETE DATA AND PRICES*

WAYNE HOME EQUIPMENT CO., INC.
800 GLASGOW AVENUE
FORT WAYNE, INDIANA

105

Association is Frank Gibbons, Viking Air Conditioning Corp.

Other new officers elected include Walter Curtis, Peerless Electric Co., vice-president and Ward Brundage, Brundage Co., secretary-treasurer. Ben Krause, Air Controls, Inc., was named chairman of publicity and has as his associate, Thompson Morrison, Morrison Products, Inc.

An Engineering committee, comprising an engineer from all member companies, has three major projects mapped out for study. These projects are standardization of blowers, completion of a simplified code for use by furnace manufacturers in testing blower-furnace combinations, and preparation of recommendations for blower testing techniques.

New York Oil Heating Group elects Officers for 1953 Term

EDWARD G. MILLER was elected president, New York Oil Heating Association, Inc., New York 18, N. Y. at the regular meeting of the Association, November 11.

Other officers elected for the 1953 year were: Fred W. Heaney, vice-president; Peter Cirillo, treasurer; Arthur Bierman, secretary and Joseph A. Ross, Jr., sergeant-at-arms.

The New York group has headquarters at 55 West 42d St., New York 18, N. Y.

Past President honored by N. Y. Oil Heating Association

THE NEW YORK OIL HEATING ASSOCIATION, INC., New York, N. Y., held a testimonial dinner for its most recent past president, Thomas F. Hanney, October 7, in the Coconut Grove of the Hotel Park Sheraton, New York. Hanney is head of Hanney Oil Co., Brooklyn.

Many other past presidents of the Association were present. Philip A. Mitchell acted as master of ceremonies.

OHI of New England Pamphlet lists Advantages of oil Heat

THE OIL-HEAT INSTITUTE OF NEW ENGLAND, Boston 15, Mass., has prepared a four-page pamphlet listing the reasons why a prospect should install oil heat.

The pamphlet stresses the advantages of oil rather than attacking natural gas, although it was basically prepared to meet gas competition. The pamphlet is written in a clear, concise manner without large amounts of difficult text.

On the back page of the pamphlet, there is a space for imprinting the dealer's name, address and individual message the company might care to include.

The pamphlet is being made available to members of the OHI of New England at a nominal price.

Oregon Heating Group holds successful statewide Meeting

OREGON HEATING INDUSTRIES, Portland 4, Ore., held a statewide meeting, at the Eugene Hotel in Portland. It was well attended by dealers from around the state.

Frank Branch Riley, who spoke on "Boring for Oil," was the featured speaker of the meeting.

VECO TROUBLE FREE Complete Combustion Testing

New-Revolutionary

CO_2 Analyzing Elements

(Sealed in Glass)

SINGLE METER — All readings on one dial Constant accuracy in service use.

3 IN 1 OPERATION

CO_2 INDICATOR
STACK THERMOMETER
DRAFT GAUGE

COMPACT PORTABLE Weighs only 7 pounds

Trouble Free—Simple to Operate
Economical to Buy
Ideal for testing to F.H.A. requirements

Victory ENGINEERING CORPORATION
SPRINGFIELD RD., UNION, N. J.
Phone UNionville 2-7150

ESPA deplores Publication of FTC petroleum cartel Report

THE EMPIRE STATE PETROLEUM ASSOCIATION, New York 17, N. Y., at its fall meeting at the Lake Placid Club, Lake Placid, N. Y., adopted four resolutions officially defining its position on the FTC report of an alleged international petroleum cartel; the trade treaty between the United States and Venezuela; competitive marketing of petroleum products on all New York State controlled highways and the virtues of the New York State "Weight-Distance" tax.

The resolutions (1) deplored the publication by the Senate Small Business Committee of the FTC report of an alleged international petroleum cartel, stating that ESPA does not consider that small business is served by "hypothetical condemnation of the petroleum industry";

(2) unanimously agreed that the recently negotiated trade treaty between the United States and Venezuela is of vital importance to our national security, our industry and its consumers and commended the government for concluding this treaty;

(3) urged that arrangements be made for competitive marketing of petroleum products on the New York Thruway and all controlled access highways in the state, and

(4) urged Governor Thomas E. Dewey to assume the leadership in bringing about the repeal of the "Weight-Distance" tax at the coming session of the Legislature.

The membership also adopted an amendment to the Constitution and By-Laws of ESPA which provides for the election of honorary directors in recognition of outstanding service to the Association and to the oil industry.

❖

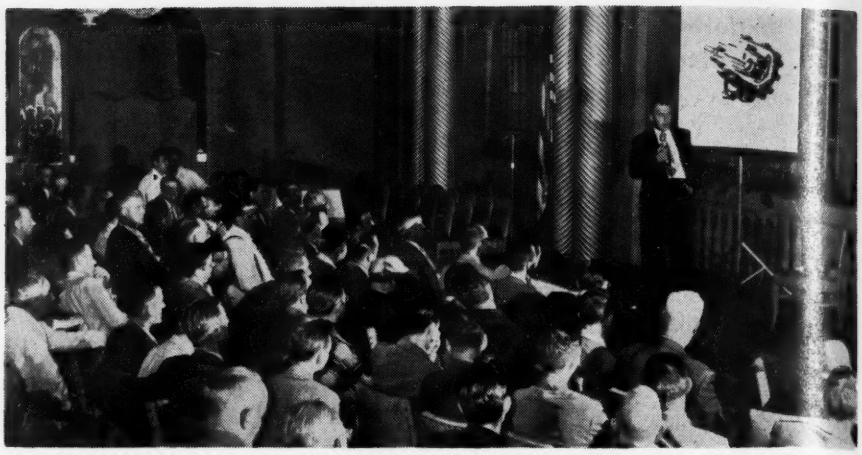
Donald C. Zinter has been appointed by Morrison Steel Products, Inc., Buffalo 7, N. Y., as its Ohio and West Virginia representative for the Mor-Sun Furnace Div. Zinter spent three years with U. S. Gauge Co., Sellersville, Pa., as sales engineer and four years as Cleveland district manager for White-Rogers Electric Co., St. Louis, Mo.

R. C. Boehm, formerly manager of the General Controls Company, factory branch office in Birmingham, Alabama, has been promoted to the position of assistant manager for both appliance and heating divisions. His headquarters will be the company's new plant in Skokie, Illinois. He will cover the territory East of the Miss.

Thomas J. Connor, formerly associated with Williams Oil-O-Matic and Electrol, has been appointed by Hev-E-Oil Burner Distributors, New York, N. Y., to handle the Queens County territory for Cleaver-Brooks Hev-E-Oil burners. Connor will assist the dealer organization on sales, engineering and closing of all retail prospects.

K. M. Nelson has been appointed district manager, Industrial Control Sales, Cutler-Hammer, Inc., Milwaukee, Wisc. Nelson will have sales responsibility for a segment of the company's industrial control line. Nelson joined the Cutler-Hammer engineering department in 1942.

Manufacturers' Activities



Robert Barclay sponsors Talk by Sundstrand on Service

ROBERT BARCLAY CO., Chicago, Ill., recently sponsored a service session where over 225 servicemen listened to a talk by B. L. Douglass, service manager, Fuel Unit Div., Sundstrand Machine Tool Co., on the best methods of installing, servicing and maintaining fuel units.

Douglass, who is currently presenting these service talks throughout the country, used realistic colored slides of actual installations to help explain answers to problems facing the servicemen. The installation information included a discussion of the advantages of single and two-stage units, when and how to use them, line-length information, how to avoid noise, preventing high vacuum, insertion of bypass plugs and fuel unit porting.

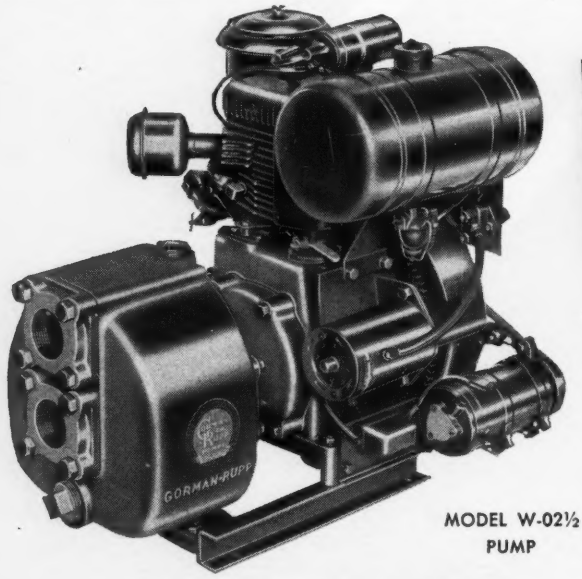
The maintenance part of the talk covered the various annual checks that should be made to keep units operating properly. The last part was on trouble shooting where Douglass explained what to do on a no heat call, dirty flame, noisy operation and so on.

U. S. Machine, Stewart-Warner consolidate; transfer Stock

CONSOLIDATION of U. S. Machine Corp., Lebanon, Ind., with Stewart-Warner Corp., Chicago, Ill., has been announced by J. S. Knowlson, president and board chairman of Stewart-Warner, and Carl J. Winkler, president and chairman of U. S. Machine.

The plan provides for acquisition by Stewart-Warner of all assets of U. S. Machine in exchange for Stewart-Warner capital stock, and the distribution of this stock by U. S. Machine to its stockholders. The plan was approved by the boards of the two companies and was submitted for approval by U. S. Machine stockholders.

The consolidation, Mr. Knowlson pointed out, will afford material additions to the present Winkler line and will bring a considerable addition to factory facilities.



MODEL W-02½ PUMP

The GORMAN-RUPP COMPANY
MANSFIELD, OHIO
A FULL LINE OF CENTRIFUGAL PUMPS

For Low Cost Delivery of Fuel Oil to the Home!

The
GORMAN-RUPP PUMP
Small Engine Driven Unit

- SAVES USE OF TRUCK ENGINE
- SAVES ON COSTLY TRUCK MAINTENANCE
- PUTS PUMP AND ENGINE EASILY ACCESSIBLE

Economies are being made on fuel oil deliveries by many oil companies with the small engine driven W-02½ pump.

It is driven by its own 7½ H.P. engine instead of by the big truck engine. Less wear and tear on the truck power plant results. A double throw switch turns off truck engine ignition when turning on ignition of the engine driven pump.

Install a Gorman-Rupp Petroleum Products pump. Increased life and fewer truck engine overhauls are worthwhile gains.

Contact us for full information

CHAS. W. M. COOTE CO., INC.
336 GREGORY AVENUE, WEST ORANGE, NEW JERSEY

NEW Century Lo-boys with

CONTROLLABLE HUMIDIFIER, AIR WASHER AND PURIFIER

Enthusiastic buyers increase Century dealers' profits!

Like all heating men, you realize the true facts about humidified heat. You know humidifiers are unsatisfactory unless they can be accurately regulated to compensate for weather changes plus differences in climate and home construction. You also know how easy and profitable it would be to sell a heating line offering built-in humidity that can be controlled to the exact degree desired.

Only Century offers this important selling advantage. It's a sales-closing exclusive for Century dealers. Century dealers proudly tell their customers, "YOU—not the manufacturer—determine the exact degree of humidity for your home. A simple humidistat, placed by your thermostat, permits accurate humidity control and makes your home a more comfortable place to live. You enjoy this heating 'extra' only when you install Century." When you sell the progressive Century automatic heating line you profit from a line that's years ahead of current standards. It's a complete line too — 38 gas and oil units that sell and satisfy. Write today for the Century catalog and complete details. You'll be glad you did.

CENTURY ENGINEERING CORP.,
CEDAR RAPIDS, IOWA

Century

Century

Advertised in Better Homes and Gardens and Small Homes Guide.

CENTURY ENGINEERING CORP., 416 Third St., Cedar Rapids, Iowa
Please send me further details on your complete automatic heating line.

- ☐ Gas Hi-boys
- ☐ Gas Lo-boys
- ☐ Gas Counterflow
- ☐ Gas Conversion Burners
- ☐ Oil Hi-boys
- ☐ Oil Lo-boys
- ☐ Oil Counterflow
- ☐ Oil Conversion Burners
- ☐ Hot Water Boilers

Name _____

Address _____

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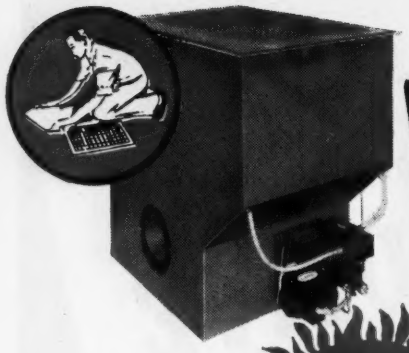
. . PIONEERS IN AUTOMATIC HEATING FOR OVER 26 YEARS



82,800 B.T.U. in Kleer-Kleen's Popular New *Easy Access* FURNACE

LISTED AND LABELED BY UNDERWRITER'S LABORATORIES, INC. ALSO BEARS COMMERCIAL STANDARDS LABEL.*

*The Commercial Standards Label is the mark of superior efficiency developed in cooperation with the U. S. Department of Commerce. It is your assurance of greater safety, durability, dependability and performance. All Kleer-Kleen furnaces EXCEED the Commercial Standards requirements.

Distributorships Available in Some Areas

- MODEL E-283-SG is the ideal furnace for homes requiring higher-than-average heat output. Designed especially for homes without basements. Readily accessible from floor level. Efficient, compact, economical. Provides adequate forced air circulation at minimum cost.
- New Kleer-Kleen Electric Ignition burner makes all Kleer-Kleen furnaces completely automatic in operation. Also available with pilot-type burner.

16 MODELS to choose from. For every home and every budget. up to 100,000 BTU

Just Set it... and Forget it! KLEER-KLEEN ELECTRIC IGNITION Does the Rest!

KLEER-KLEEN MANUFACTURING CO. OAKLAND, CALIFORNIA
America's Finest Furnaces

. . . . Manufacturers' Activities

Torrington and Iron Fireman win Honors for annual Reports

TORRINGTON MFG. CO., Torrington, Conn., was presented with a bronze "Oscar of Industry" award for taking first place honors in *Financial World's* annual report competition among members of the international metal products industry.

S. W. Farnsworth, president of the Connecticut firm, accepted the publication's bronze trophy at a New York banquet attended by more than 1,300 business and financial executives from the U. S. and Canada.

Best of Industry award, runner-up prize, went to Iron Fireman Mfg. Co., Cleveland, O. C. T. Burg, vice-president, sales, accepted the award in behalf of Iron Fireman. In the past, Iron Fireman annual reports have taken four Bronze Oscars.

Penn opens new Warehouses in five key district Areas

FIVE NEW DISTRICT WAREHOUSES have been established by Penn Controls, Inc., Goshen, Ind., to be operated in conjunction with district sales offices to give increased service to customers in key distribution centers. Warehouses are now in operation in the Boston, New York, Philadelphia, Cleveland and San Francisco areas.

The Boston warehouse, under the direction of A. W. Barr, district manager, is located at 175 Adams St., Newton, Mass. The New York warehouse, supervised by district manager, George Sanders, is located at 811 Bergenline Ave., North Bergen, N. J. The Philadelphia district warehouse, managed by A. L. Rubel, is at 4503 N. Broad St., Philadelphia, Pa. The Cleveland warehouse, J. F. Kinney, manager, is at 6207 Superior Ave., Cleveland, O. The San Francisco district warehouse is located at 920 Grayson St., Berkeley, Calif. District manager E. T. Layport is in charge.

"Take It From an Old Bag Master..."

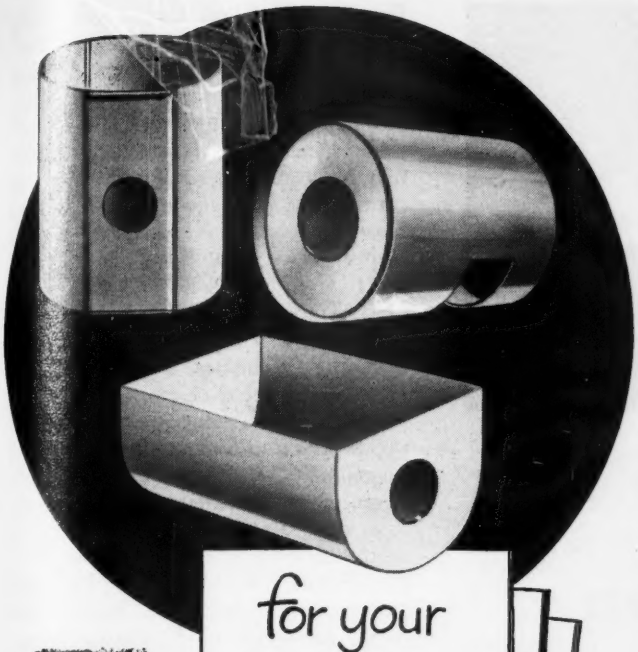
ALWAYS INSIST ON SOOTMASTER

The Filter Bags designed to fit every make and model vacuum cleaner used for cleaning oil-fired boilers and furnaces. They are made of special-woven fabrics, triple-stitched with leak-proof seams. Every bag carries a replacement guarantee if found defective in materials or workmanship.

JOBBERS: Let us send you literature and details on Sootmaster Products.

MASTER-CRAFT SUPPLY CO., INC.
HAVERSTRAW, NEW YORK

Manufacturers of SOOTMASTER Vacuum Cleaners and SOOTMASTER Filter Units



for your

COMBUSTION CHAMBERS

HEAT-RESISTING

STEEL

SHEARED TO SIZE

If you are using or contemplating the use of heat-resisting steels for combustion chambers for oil burner furnaces, we are specialists in producing these types of steels.

Whether you are a large or small user of these steels, our steel making facilities can offer exceptional service by especially shearing to your specified combustion chamber steel blanks, or multiples thereof.

1 *More quiet burner operation*
2 *Cleaner heat*
3 *Better temperature control*
4 *Considerable savings on fuel costs*

Write us for additional information

ENGINEERING B-W PRODUCTION

Ingersoll STEEL DIVISION

BORG-WARNER CORPORATION

310 South Michigan Avenue, Chicago 4, Illinois

Plant: New Castle, Indiana

There's a bigger,

BETTER FUTURE

for you with...

They Outsell Because They Excel

Here's why!

AS A U. S. DEALER YOU REPRESENT A LINE OF OIL BURNERS THAT . . .

- you can sell with profit
- you can install with confidence
- require a minimum of service
- are easy to service
- outsell because they excel
- carry a time-tested and trusted name

AS A U. S. DEALER YOU ARE ASSOCIATED WITH . . .

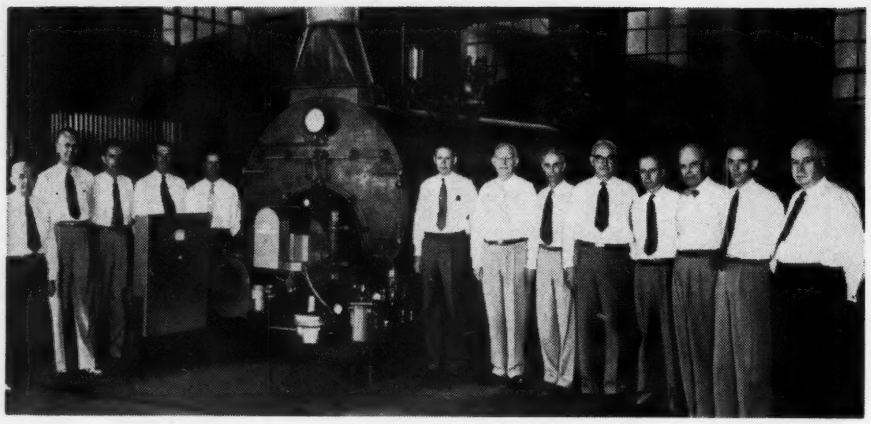
- a young, aggressive organization
- men who have been successful in the oil burner field
- men who realize that your success is their success
- men who deliver what they promise

You may qualify as a U. S. dealer in your community.

Contact your supplier or write us today.

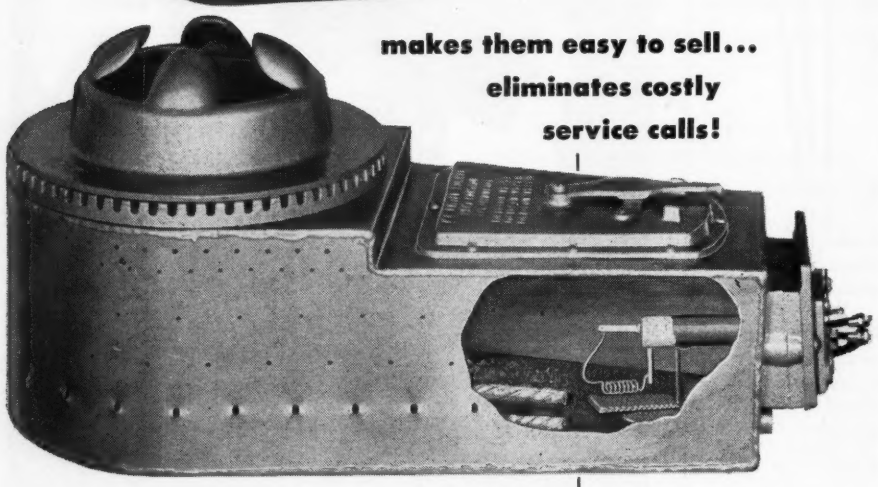
U. S. OIL BURNER DIVISION

THE CARLIN COMPANY — WETHERSFIELD, CONN.



The Kewanee-Ross Corp., *Kewanee, Ill., and Iron Fireman Mfg. Co., Cleveland, O., have joined forces to develop and market the new Kewanee-Iron Fireman boiler-burner unit although they are two entirely separate companies, without financial or corporate connection. The above picture shows Iron Fireman and Kewanee executives inspecting the new unit. Shown from left to right are: W. B. Russell, president, Kewanee-Ross; C. T. Burg, vp, sales, Iron Fireman; E. C. Thompson, sales eng., Kewanee; Ben H. Schulze, vp, boiler sales, Kewanee; E. M. Palmer, vp, Kewanee; E. C. Webb, vp, production and engineering, Iron Fireman; C. E. Bronson, vp, product engineering, Kewanee; J. M. Hartman, sales eng., Kewanee; Dale Wylie, director advertising and sales promotion, Iron Fireman; R. M. Turner, Kewanee engineering staff; L. W. Charlet, sales dept., Kewanee; C. K. Ferguson, advertising mgr., Kewanee, and J. J. Graham, sales dept., Kewanee.*

the magic operation of H.C.Little oil burners



makes them easy to sell... eliminates costly service calls!

Because H. C. Little Oil Burners are equipped with the magic of H. C. Little low-voltage electric ignition, they automatically light themselves—yet have no pilot light, no high voltage spark! In the event of electric power failure they may be operated by hand until electric power is resumed—an amazing advantage!

This means that you can offer your customers fully automatic oil heating, thermostatically controlled, at lowest cost. The patented H. C. Little Progressive Low-Temperature Carburetion principle provides complete combustion of the oil without "cracking"—no soot or hard carbon deposits. Once installed, H. C. Little Oil Burners provide trouble-free operation for years—require no costly service calls—save you a large part of your service expense.

You can profit better by handling H. C. Little Oil Burners. ***Write today for sales discounts and complete specifications.***

LISTED BY UNDERWRITERS' LABORATORIES

BURN LOW-COST FURNACE OILS & CATALYTIC OILS

SAFE, SILENT OPERATION
—no motors, no blowers, no fans, no moving parts!

FLEXIBLE CAPACITIES
—seven sizes—35,000 B.T.U. to 350,000 B.T.U.

NO RADIO OR TELEVISION INTERFERENCE
—no high voltage electrical discharge.

THE LEADER FOR 23 YEARS—
more than 200,000 installations!

H.C.Little Burner Company, Inc.
Factory & Head Office
San Rafael, Calif.
Factory Representatives in 15 Principal Cities

Honeywell plans Expansion of main Plant in Minneapolis

PLANS for a $900,000 expansion of the main Minneapolis-Honeywell Regulator Co. in Minneapolis, Minn., are announced. It is the third expansion move to be disclosed by the automatic controls firm in recent weeks.

Application has been made to government agencies for a certificate of necessity to construct a two-floor addition that will add 59,000 sq. ft. of floor space to the present main plant building which, in addition to extensive manufacturing operations, also houses the company's executive and administrative offices. The reason given for the plant expansion was because of the company's expanding ordnance program.

White-Rodgers celebrates Opening of New York Branch

SEVERAL HUNDRED CUSTOMERS and friends attended the formal opening party and reception at the new New York branch office of the White-Rogers Electric Co., St. Louis, Mo., at 35-14 Cresscent St., Long Island City, on November 14.

The new building has parking facilities, 10,000 feet of storage and modern office facilities. In charge of the festivities were Jack Searles, vice-president in charge of sales from the

(*Please turn to page* 130)

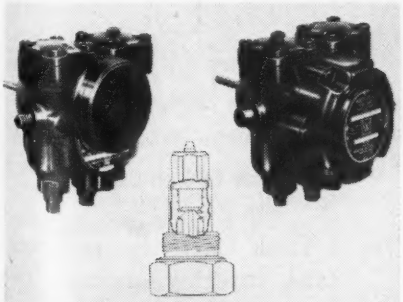
New Products

Each New Products item has an identifying number. If you want more information on any equipment listed here, circle the corresponding number on the reply card appearing on the facing page and mail to us. No postage is required.

Webster Electric has new Type valve Assembly for fuel Unit

WEBSTER ELECTRIC has introduced a new type of valve assembly in fuel unit construction and has made two new additions to its ignition transformer line, types U and CU.

The new valve, available in both single and two-stage fuel units, is engineered to be immune to deterioration beyond all normal operating conditions and to eliminate nozzle drip. The valve assembly consists of a crown-shaped stainless steel valve seat and a valve containing a special plastic disc which, the manufacturer says,



literally "swallows" metal particles and other foreign matter which might prevent perfect seating with ordinary valve construction. This new valve assembly is interchangeable in all Webster-Electric fuel units sold in the past 16 years.

Types U and CU transformers, the company states, save the serviceman's time because of their adaptability and accessibility, and reduce inventories since they meet most replacement requirements. Among their features are large, full junction boxes located either directly on top (Type U) or at one top corner (Type CU) for accessibility, and six knockouts instead of four. Since these transformers use all of the standard Webster Electric bases, they can be used to replace, most Webster Electric transformers now in use. Improved internal shielding is reported to cut radio interference to a minimum.

The new transformers are furnished with a 115 volt, 60 cycle primary and a 10,000 volt secondary. They are 4-11/16" high, 5-5/16" long and 4⅜" wide.

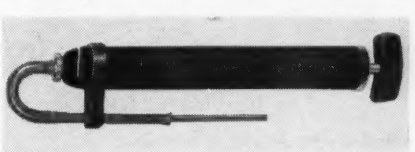
Made by: Webster Electric Co., 1900 Clark St., Racine, Wisc.

Circle F41 on card

True-Spot smoke Tester cuts "pulling Effort" for Pump

TRUE-SPOT SMOKE TESTER is designed to eliminate by almost 50% the "pulling effort" required to operate its suction pump. A feature of the tester is the use of armored rubber tubing between the head of the instrument and the sampling tube, which enables the operator to draw the flue gas sample in close quarters, from any position, without danger of damaging the sampling tube.

The True-Spot provides permanent smoke spot record of an oilburner installation by a sample of the combustion gases from the furnace flue through filter paper which is supplied in 7½" strips that are easy to insert into the instrument. Drawing the sample through the tester turns the test paper to a shade of gray, which will vary from light to dark depending upon the smokiness of the flame. The discoloration on the test paper is then compared with nine shadings on a "Scale of Soots" which shows the limits of permissible smoke for various burners and types of heating systems.

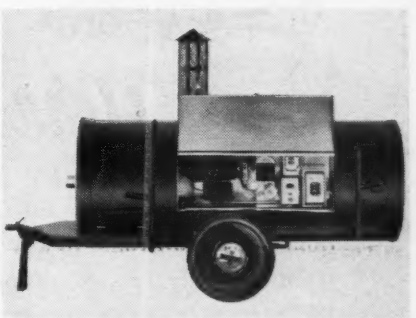


Made by: Bacharach Industrial Instrument Co., 7301 Penn Ave., Pittsburgh 8, Pa.

Circle F42 on card

Aldrich Company announces oilfired, automatic Crop Drier

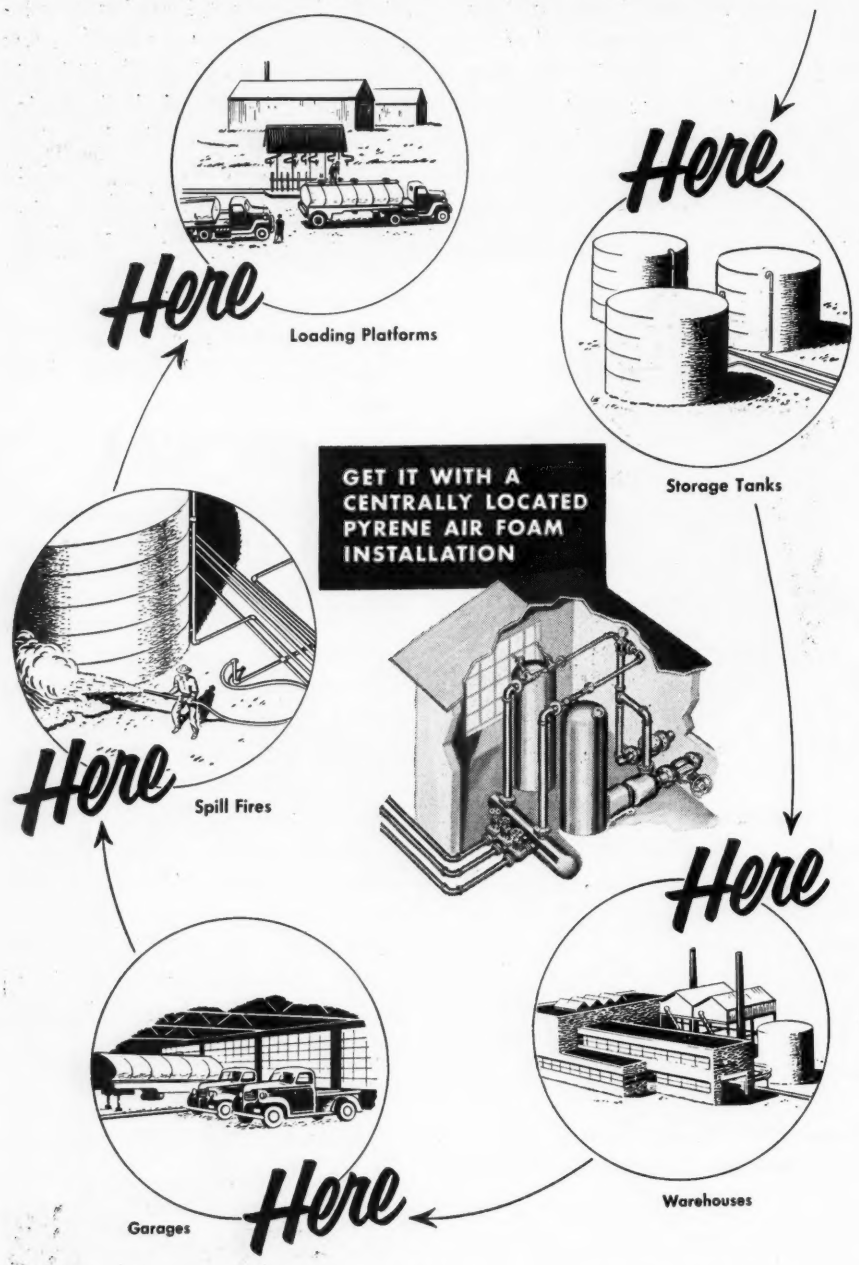
THE ALDRICH crop drier has been announced as an oilfired, completely automatic self-contained unit. Besides crop drying applications, the unit can be used for portable heat installations in work shops, construction jobs, protecting perishables and similar uses. The self-contained, direct-fired heater is equipped with an Aldrich gun type oilburner, develops 700,000 Btu/hr and incorporates a heavy-duty 40" propeller fan. The drier is an integral part of a 2-wheel trailer, equipped with a standard hitch and wheels for 15" tires.



Featuring push-button starting, thermostat, limit and all other controls are included for automatic operation. Exposed controls, such as switches and starter, are housed in weather-proof cabinets. A 5-hp, 1750 rpm, 220-volt, single phase ball-bearing, repulsion induction motor is furnished as standard equipment.

Also included is a 40" diameter, 10 ft. long fireproof canvas duct for con-

YOU NEED PYRENE AIR FOAM PROTECTION



A Pyrene* installation enables you to instantly feed large quantities of air foam to any predetermined point. Pipelines run from centrally located proportioning tanks to all your fixed fire hazards, such as storage tanks, as well as to hose stations. Simply by turning the proper valve, one man can quickly start producing the air foam either at stationary foam makers or portable foam nozzles. Puts large fires out fast; guards against reflash. Inexpensive, too. Protect your investment this easy way. Write for name of nearest Pyrene jobber today.

**T.M. Reg. U.S. Pat. Off.*

Pyrene AIR FOAM

PYRENE MANUFACTURING COMPANY

695 Belmont Ave. Newark 8, New Jersey

Affiliated with C-O-Two Fire Equipment Co.

ducting heated air to the desired point. A number of hook-ups have been developed for application to a variety of barn or crib layouts. The fan element of the dried can be supplied as a separate element with a tractor drive and the heating unit can be added later, if desired. In addition, the fan element on the complete unit can be operated independently of the heating element.

Made by: Aldrich Co., Wyoming, Ill.

Circle F43 on card

Goodrich lightweight Hose for Wet or dry Service

GOODRICH type 79 flexible tank hose can be used in loading and unloading storage tanks, tank cars and tank trucks at refineries or bulk stations. Made for wet or dry service, it conducts gasoline, distillate, kerosene, diesel oils, and other fueloils. It also can be used for transferring water, oil suspensions, or emulsions but is not adaptable for heavy suction service.

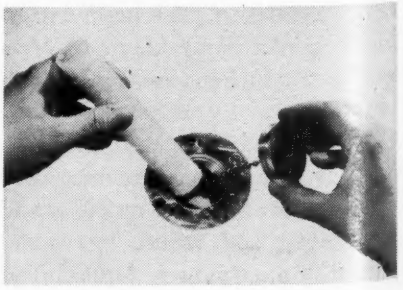
The hose, according to the manufacturer, does not flatten easily and returns to shape when bumped, kinked or crushed. The cover, black in color, is gasoline proof, oil proof, abrasion resistant and also resistant to moisture and sun checking. The tube is gasoline and oil proof. A wire braid in reinforcing plies acts as a static ground to couplings. The hose comes in manufactured lengths of 50 ft. Internal diameter sizes are 2", 2½" and 3", with maximum discharge pressures of 175, 150 and 125 psi respectively.

Made by: B. F. Goodrich, 1951 Muskingum Avenue, Marietta, Ohio.

Circle F44 on card

Sav-A-Tank Cartridge protects tank Interior against Rust

SAV-A-TANK CARTRIDGE neutralizes all corrosion acids and deposits a microscopically thin glass-like protective



film on the inside of an oil storage tank where the water is present and prevents the water from touching the metal, thereby stopping all rust and corrosion. The cartridge is dropped into the tank once a year for tanks under 1100 gallons capacity. For larger tank sizes use one additional cartridge for each additional 1000 gallons of capacity.

Made by: Sudbury Laboratory, So. Sudbury, Mass.

Circle F45 on card

Milvaco's Nozzle adaptable for Loading of oil Trucks

MILVACO'S Underwing Valve Nozzle is being used widely for high-speed aviation refueling, but is adaptable for bottom loading of large oil trucks. For the latter purposes it is economical the manufacturer says, because it

eliminates platforms and other facilities ordinarily required for overhead fueling.

The Underwing valve nozzle is made of lightweight Milvaloy and is available in a 2½" size.

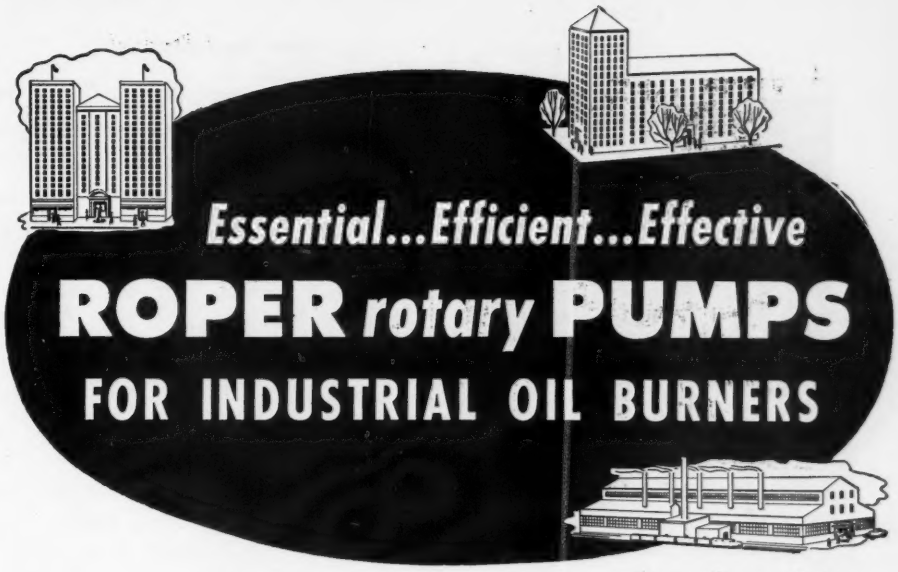
Made by: Milwaukee Valve Co., Milwaukee 7, Wisc.

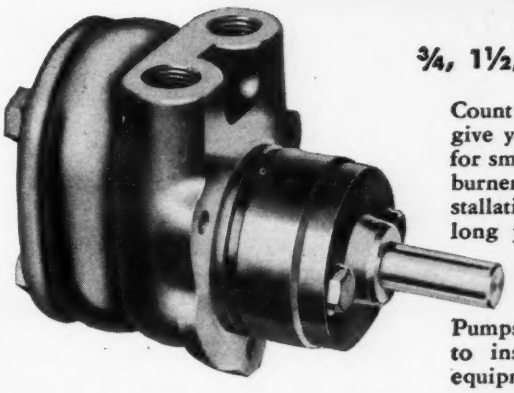
Circle F46 on card

Anchor adds two new Models to winter air Conditioners

ANCHOR AIRE winter air conditioners now include an economy model, 48" high for small home basement installations as well as a suspended unit for basement, attic, ceiling, or underfloor installation.

The Economy model, which occupies about 6 sq. ft. of floor space with





¾, 1½, 3 and 5 G. P. M. SIZES

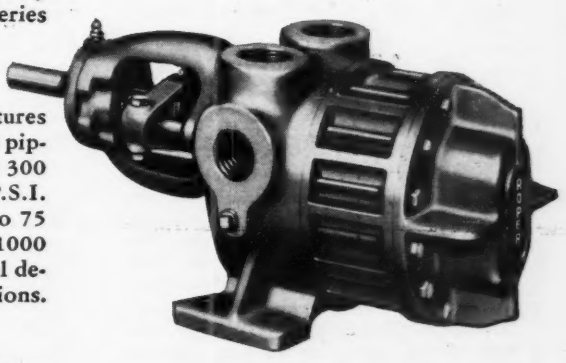
Count on Roper Series "K" Pumps to give you the features that are essential for small and medium-size industrial oil burners. Compactness and ease of installation . . . dependable operation over long periods of running time . . . fuel supply at correct pressure and viscosity are but a few advantages offered by Roper Series "K" Pumps. You owe it to those you serve to install Ropers as either original equipment or replacement.

Tested and Approved for Oil Burner Service

Roper Series "K" Rotary Pumps meet the standards set up by Underwriter's Laboratories, Inc. and then some! These reliable pumps for oil burner service are available in either packed box or mechanical seal designs — with or without relief valve. The 3/4, 1-1/2, and 3 G.P.M. sizes are flange mounted . . . 5 G.P.M. size is foot mounted.

For Heavy Duty Installations

In the larger oil burners — those burning Bunker "C" oil or heavy fuels — Roper Series "F" and Series "H" are recommended. Both are positive displacement pumps, self-lubricated by liquid pumped. Series "F" features four-port design for 8 optional piping arrangements — sizes 1 to 300 G.P.M., pressures to 300 P.S.I. Series "H" Pumps come in 5 to 75 G.P.M. sizes — pressures to 1000 P.S.I. Also available are special design pumps for unusual applications.



ROPER Rotary Pumps

SEE OUR CATALOG IN SWEET'S

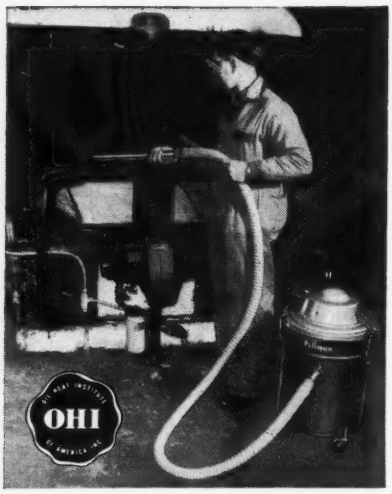
GEO. D. ROPER CORPORATION
772 Blackhawk Park Avenue, Rockford, Illinois
Please send catalog with complete details.

Name.....

Address.....

City.....

Company.....



Efficient design lowers price of Pullman Furnace & Boiler Vacuum Cleaner

Here is the vacuum cleaner that gets you into the cellar and allows cleaning jobs to develop into profitable service work. Light in weight and very portable — only 30 pounds, yet has 1½ bushel capacity. No outside bag to worry about. Clean, neat appearance for working in living quarters of the home. Integral motor, internal filter, and circular air flow increase the efficiency of the PULLMAN vacuum and allows manufacturing cost savings which are reflected in its low price. No maintenance to worry about — just empty the container. Ball bearing, life lubricated, sealed motor. Electro-welded steel container. Equipped with 35′ cord, 10′ hose, and 27″ crevice tool for only $159.50 list, less trade discounts. Send for circular and name of nearest jobber.

NEW PULLMAN *Disposable* PAPER FILTER

New disposable paper filter protects fabric filter from soot acids and clogging. No more after-hours filter cleaning — just toss away and drop in clean filter paper.

CONVERTS TO POWER BLOWER in jiffy. Blow out fuel tanks, clean air ducts, registers, beams, floors and in shop.

Pullman

PULLMAN SALES CORP.

MFR: BOSTON 19, MASS.

a height requirement of 4 ft. can be fired with pressure or vaporizing type burners. Designed in several models for combination gas-oil and oilfiring only, the unit has a bonnet output of 80,000 Btu per hour. Jacket casing is of heavy weight furniture steel, finished in enamel.

Suspended units, which come in three models, ASU 75, ASU 110 and ASU 160 with heat output being 75,000, 110,000 and 160,000 Btu per hour respectively, are factory-assembled and ready to install. Jacket is in two-toned hammerloid grain. These suspended units are designed for use with Anchor model C-3 or SA Oil Burners.

Made by: Anchor Division, Stratton and Terstegge, Inc., Box 311, New Albany, Indiana.

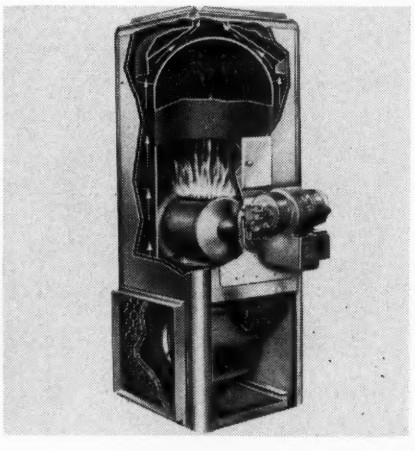
Circle F47 on card

Delco Conditioner designed for three heating Systems

DELCO APPLIANCE DIV., has introduced three Delco-Heat oilfired Conditionairs designed for use with conventional, high velocity or perimeter warm air distribution systems.

Model OPC 75H is a high model Conditionair designed for utility room, alcove or basement installation. The full length case panels enclose the furnace and blower in a single compact unit. Knockout panels permit the attachment of the return air filter assembly to either side of the unit. A floor filter assembly is also available for installations where the return air is brought up through the floor directly into the bottom of the Conditionair.

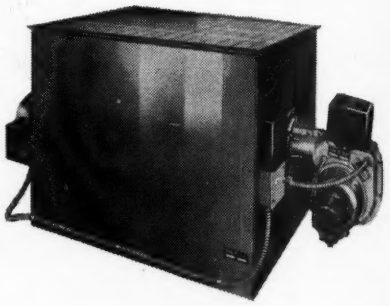
Model OPC 75LD is a deluxe-type Conditionair designed for basement



(ADVERTISEMENT)

Delta now producing new gun type floor furnace

DELTA HEATING CORPORATION is in full production with its new, revolutionary gun-type shallow floor furnace. Actually quieter in operation than most pot-type furnaces, this new unit burns #2 fuel oil thoroughly without soot or carbon. This furnace is factory wired and assembled—ready for installation. A Minneapolis-Honeywell thermostat and protectorelay control its safe operation. The large built-in circulating fan is operated automatically by the built-in fan and limit switch. Instantaneous spark-plug ignition is obtained from the large 10,000 volt transformer, mounted on the oil burner. No pilot or after-fire is required to light this unit. A built-in



fuel pump will lift oil up to 20 feet without the use of an additional wall pump common to pot-type burners. The oil tank can be located at a level lower than the furnace—and even underground. The forced-draft Delta gun-burner eliminates the need for special hi-draft chimneys. This new Model FL 80 furnace is shallow, measuring only 29½ inches from top to bottom. Only 24 by 32 inches at the grille, valuable floor space is saved. With all its many advantages over old-type floor furnaces, this new Delta unit sells for less than many other makes. Write for FREE literature, specifications and price. No obligation. A post card will do.

Made by: Delta Heating Corp., Trenton 8, N. J.

installation in popular size homes. Full length case panels enclose the furnace and blower-filter in a streamlined compact unit.

Model OPC 75HR is a counterflow Conditionair for installation with any of the perimeter systems of warm air distribution. The blower is mounted on top of the furnace to provide the necessary downward movement of warm air.

Made by: Delco Appliance Div., General Motors Corp., Rochester 1, N. Y.

Circle F48 on card

Madsen Converter for gun type Oilburners

THE MADSEN converter, which incorporates the Shell combustion head and Minneapolis-Honeywell delayed-opening oil valve, can be fitted to any high pressure gun type burner. It is designed to solve the problems of improving the efficiency of conventional oilburners and is easily installed.

Use of the converter reduces the amount of excess air required for clean efficient combustion by completely mixing the oil and air. The delayed opening oil valve provides clean, quiet, smoke-free starts by preventing delivery of oil until maximum air delivery from the fan has been obtained.

Made by: Madsen Service, 3549 Nicollet Ave., Minneapolis 8, Minn.

Circle F49 on card

Sheet metal pipe cutting Tool cuts clean Edge in short Time

THE AMERICAN Cutting Machine, No. 20 is designed to cut pipe with clean, smooth edges on sheet metal pipe in 30 seconds. The clean cut is made possible by having the upper cutting wheel screw down on a slight taper which moves the upper cutter, bringing both cutter wheels together on the flat sides. This takes up any machine wear and maintains a keen cutting edge at all times.

The crimping gears and beading rolls are cut from steel. The teeth are

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YOU SHOULD BE HERE

. . . to see and learn about the latest developments in

OIL HEATING VENTILATING AIR CONDITIONING

At Chicago's International Amphitheatre, from Jan. 26-30, you'll SEE *all* that's new, LEARN the latest trends and practices, GET a wealth of new ideas, and MAKE a host of valuable contacts during the 11th International Heating and Ventilating Exposition.

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Arrange now to ATTEND and BENEFIT from this exposition of ideas and progress; the largest of its kind ever held.

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INTERNATIONAL HEATING & VENTILATING EXPOSITION
Under Auspices of American Society of Heating & Ventilating Engineers
MANAGEMENT INTERNATIONAL EXPOSITION CO.

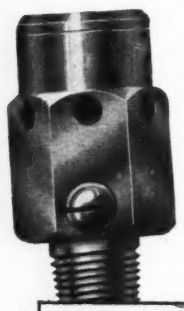
YOU'LL LICK YOUR AIR PROBLEMS WHEN YOU

Buy Taco

AIR VALVES

THEIR *Greater Dependability*

MEANS LESS SERVICE FOR YOU



TACO-VENT

Automatic

HOT WATER

AIR VALVE

automatically vents radiators, convectors and baseboard radiation.

biltin water control prevents leaking

REQUIRES NO ADJUSTMENT

TACO'S

New Quiet

STEAM

AIR VALVE

NO SNAP —
NO POP —
NO HISS —
NO PING —

vents steam radiators, convectors, mains. It's fast venting, simple, silent and good looking.

Both CAN BE INSTALLED IN ANY POSITION BUT UPSIDE DOWN

Better Heating-Better with Taco

Taco

TACO HEATERS, Incorporated
137 South Street • Providence 3, R. I.

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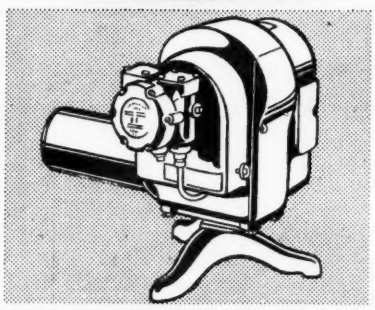
NO FLY-BY-NIGHT

Satisfying Dealers and Users Since 1927.

OIL THRIFTY

HERCO



HERCO OIL BURNER CORPORATION, LANCASTER, PA.

GEM COMBUSTION CHAMBERS

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The Gem Clay Forming Company

SEBRING, OHIO

Established 1907

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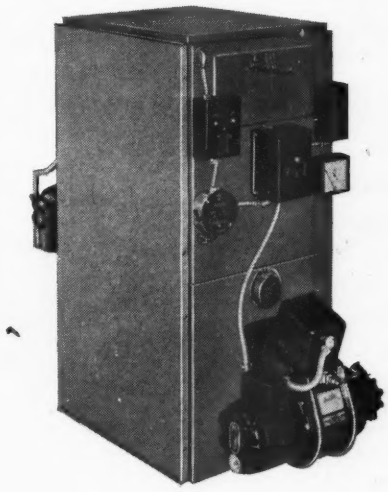


A COMPLETE LINE OF HEATING UNITS

Atlantic

STEEL BOILER CO., INC.

22nd and WASHINGTON AVENUE
PHILADELPHIA 46, PENNA.

IMMEDIATE DELIVERY!

275 Gallon Oil Storage Tanks

(Underwriter Approved)

HARLAN & HOLLINGSWORTH
TANK CORPORATION
Executive Offices: 225 S. 15th ST., PHILA. 2, PA. • Plants: PHILADELPHIA—WILMINGTON, DEL.
Affiliates: UNITED STEEL BARREL CO. — UNITED STEEL CONTAINER CORPORATION

FOR MORE EFFICIENT One Pipe Hot Water Systems

Buy Taco

VENTURI FITTINGS

CAST IRON
screwed connections

BRONZE
sweat connections

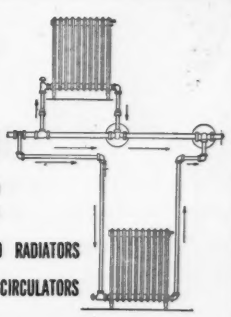
Only One

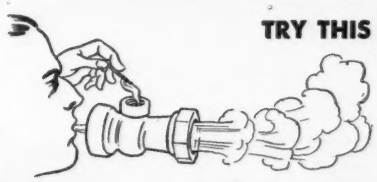
TACO VENTURI FITTING

per radiator . . . on the return
(use an ordinary tee on supply)

SAME FITTING HANDLES UPFEED OR DOWNFEED RADIATORS

WORKS EQUALLY WELL WITH LOW OR HIGH HEAD CIRCULATORS





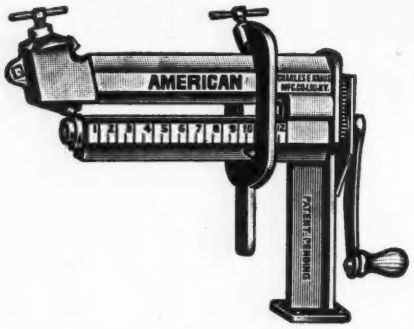
TRY THIS FOR YOURSELF

Blow smoke through Taco Venturi fitting while holding lighted match on return. The flame is sucked into return but smoke goes out other end only.

Better Heating-Better with Taco

TACO HEATERS, Incorporated
137 South Street • Providence 3, R.I.

READ TACO'S OTHER ADS IN THIS ISSUE



of a special diamond point design which are intended to produce a fine, even crimp.

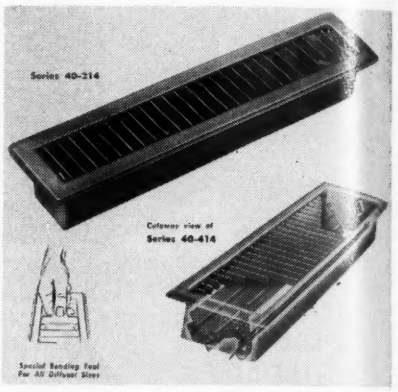
Made by: Charles E. Kraus Mfg. Co., Dept. 15-PH, 122 S. 8th St., Louisville 2, Ky.

Circle F50 on card

Two Features and three Models added to Lima floor Diffuser

TWO EXTRA FEATURES have been added to the Lima Floor Diffuser which now is available in three additional models. One new feature is the specially notched diffusion vanes to facilitate re-setting of directional air diffusion. The notching technique makes shifting the diffusion vanes much easier by using a special tool.

The second feature is a damper locking device, to prevent accidental changing of the balance damper position. The special locking device is hidden when the diffuser is installed and constantly holds the damper in balance



position, thus eliminating the use of quadrant dampers.

In addition to the original Lima 2 x 14 Floor Diffuser, other sizes now available are 4 x 10, 4 x 12, and 4 x 14.

Made by: Lima Register Co., Lima, Ohio.

Circle F51 on card

Heil adds to furnace Line lowboy and highboy Units

A HEIL oilfired lowboy winter air conditioning unit is the newest addition to its heating equipment line. Constructed of alloy steel, it has five two-direction flue passages with the heat exchanger tapered at the top. The tapered top design is for purposes of holding the hot gases in the unit. It is also fitted with baffles in order to extract the maximum heat from the gases by a "scrubbing" action. Equipped with an oversize blower for slower running speed to eliminate "on and off" sensation, the fan motor "floats" in a three point suspension type mounting. Register delivery capacity is 68,000 Btu per hour with an oilfiring rate of 0.80 gallons per hour. Overall dimensions are 53 7/16" length, 20½" width, height 48½".

In addition to the lowboy there is a new model UF Series highboy type winter air conditioner with the same heat exchanger and blower features as in the lowboy model. The pressure atomizing oilburner is convenient for

The UNINVITED GUEST...

Mr. Snow-Man has made himself right at home in the Browns' living room. Their oil burner has no FULFLO Filter and so this chilly intruder is going to stay till the service man can find time to come and unplug the nozzle.

FULFLO Filters prevent plugged nozzles. Their Honeycomb Filter Tubes trap all oil impurities down to microscopic size . . . stop costly service calls . . . insure uninterrupted home heating in all kinds of weather. Better heat for less fuel cost.

Mr. Snow-Man would never have called
If a FULFLO Filter had first been installed.

IF YOUR JOBBER CAN'T SUPPLY YOU, WRITE OR WIRE US TODAY

COMMERCIAL FILTERS CORPORATION
2 MAIN STREET. MELROSE 76. MASSACHUSETTS

BASIC TEST TOOLS

FOR PROFITABLE SALES AND SERVICE

Combustion testing will pay you big dividends in gaining you competitive leadership and neighborhood recognition of your competence as a heating expert. The combustion-testing kit shown above contains precision-made, quality instruments with which you can make fullest use of your know-how in making a fuel conservation survey, adjusting any make and type of oil burner for clean, trouble-free and economical operation, or running an efficiency test which will convince even the most skeptical customer on the need for replacement or modernization.

The FYRITE Utility Kit contains instruments for measuring not only CO_2, stack temperature and draft, but smoke in the flue as well. The inclusion of the smoke-measuring instrument is a forward step of significant importance to alert heating dealers and service men. Checking the flue gas for both CO_2 and smoke makes possible to adjust the burner with speed and ease for highest possible combustion efficiency, as well as for clean burning of the fuel resulting in heating plant performance that satisfies customers and safeguards against costly service requirements.

•

The FYRITE Utility Kit shown above is part of the complete line of Bacharach Service Instruments for the Heating Trade which, in addition to Combustion Testing Kits, includes Temperature Recorders, Grille Velocity Indicators, Pyschrometers, and specialized oil-burner servicing equipment. Your wholesaler will gladly supply any of these instruments.

ASK YOUR REGULAR SUPPLIER ABOUT THE UTILITY KIT OR WRITE TO US FOR BULLETIN 777.

BACHARACH Industrial Instrument Company

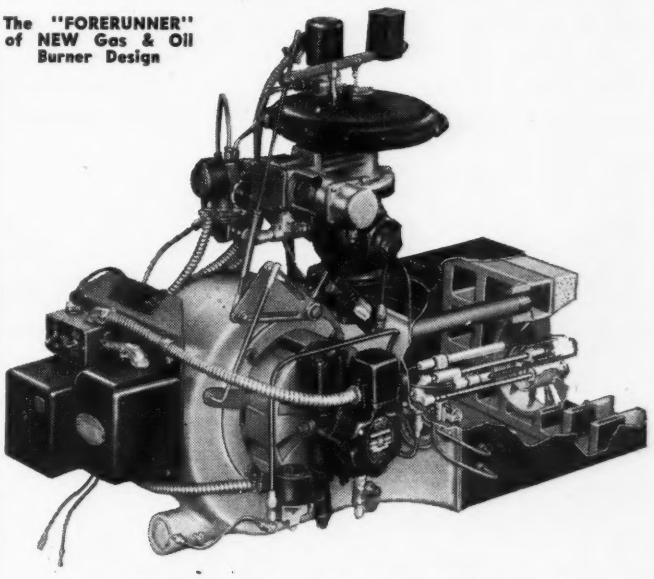
7301 Penn Avenue • • Pittsburgh 8, Pa.

A distinguished Pair of Dual Fuel Burners

Built On

The *Entrained Combustion* Principle

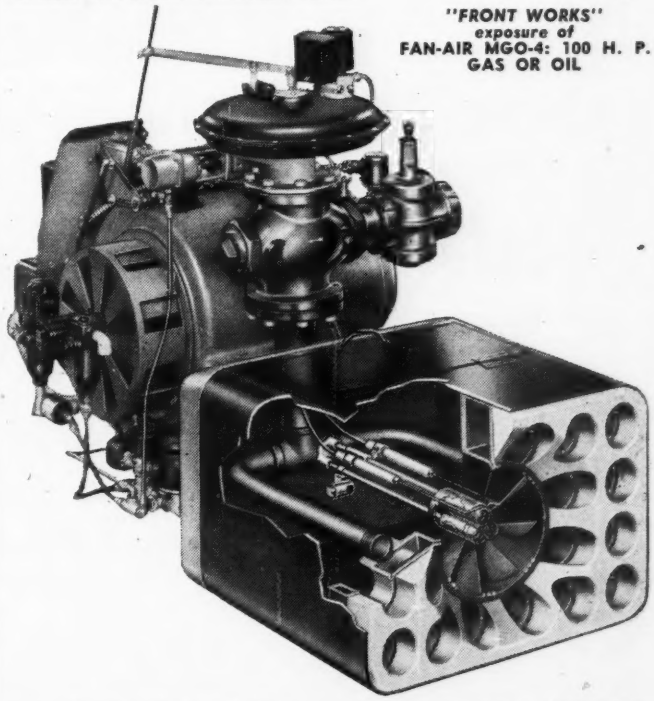
The "FORERUNNER" of NEW Gas & Oil Burner Design



MODEL FAN-AIR MGO-3: 50 H. P. GAS OR OIL

SEEING IS BELIEVING so we proudly present two pictures of the "FAN-AIR MGO" SERIES MECHANICAL DRAFT combination GAS & OIL BURNERS Designed to fill the trend and need of the Gas Industry, employing the ENTRAINED COMBUSTION PRINCIPLE of low gas pressure service combined with oil in a revolutionary manner.

"FRONT WORKS" exposure of FAN-AIR MGO-4: 100 H. P. GAS OR OIL



A simple "flip of the switch" or automatic remote control, changes from GAS to OIL or in reverse. Air register synchronized to both fuels; delayed oil valve prevents smoky starts; full gas and oil retention; centrally assembled appurtenances instantly removable; no complex adjustments necessary; GAS or OIL and AIR mixed within burner head. It's an exclusive METTLER design with patents pending. Nothing else like it on the market. WRITE FOR BULLETIN 12-S.

The METTLER CO. INC.

4366 WORTH ST. LOS ANGELES 63, CALIF.

servicing, mounted 31 inches from the floor. The unit with a bonnet capacity of 80,000 Btu per hour and a register delivery of 68,000 Btu is also fired at 0.80 gallons per hour rate. The highboy model is suitable for closet or utility room installations, and can be located on a wooden floor, 1 inch from combustible walls. The highboy is 68" in height, 23½" wide and 37 7/16" in depth.

Made by: The Heil Company—Milwaukee 1, Wisconsin.

Circle F52 on card

Therma-Gauge measuring Tool for tank content Liquids

SENTRY Therma-Gauge is designed for accurately measuring tank content liquids. The gauge has a solid red thermometer type indicator which is easily readable in contrast to its calibration chart. The gauge unit has a zinc base, two-piece, unbreakable die-cast assembly. Non-corrosive brass rivets are used. Also, it has a double-coated cork float that is impervious to oils, most acids and chemicals.

Therma-Gauge is guaranteed by the manufacturer to withstand filling pressure in excess of 70 lbs. psi, which safeguards against leakage and fire.

Installation is made by screwing the two-piece die-cast plug into the tank opening with an ordinary hand wrench. The entire calibration and float assembly units are inserted and positioned through the plug nut opening, then secured by a lock nut by hand tightening only.

Made by: Krueger Sentry Gauges, Green Bay, Wisc.

Circle F53 on card

Good things come in ... SMALL PACKAGES

Come and see what INTERNATIONAL ECONOMY® is showing at the

International Heating and Ventilating Exposition

Chicago, January 26-30, Booth 443

Everybody will be talking about the 1953 International Economy® line and the new, completely packaged hi-boys, lo-boys, gravity units, counterflos — see them yourself at Booth 443.

You'll discover why the Economy® line meets all of today's heating needs—why good things for *you* can come in small packages!

over 110 years of heating experience at your service . . .

International heater co.

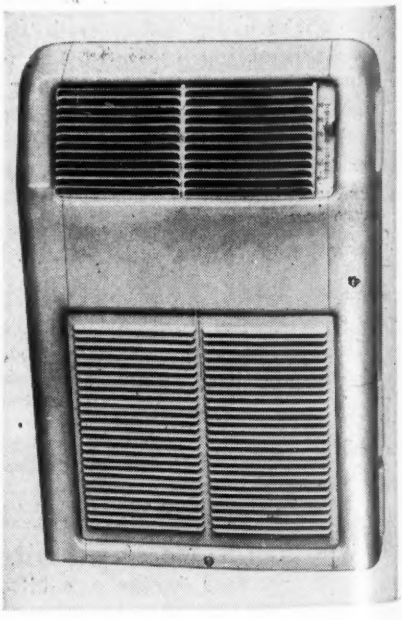
utica 2, n. y.

Western Office and Warehouse . . . 1933 Wentworth Ave., Chicago 16, Illinois

Swenson heater Unit utilizes Steam and forced warm Air

SWENCO HEATING SYSTEMS are described by the manufacturer as modulating systems, operating from a super-insulated steam boiler placed anywhere in the structure with the system utilizing inexpensive, small diameter copper tubing for steam and condensate return which is installed like house wiring from boiler to individual Swenco heater units in each room.

Each Swenco Room Heater Unit draws in cool room air, filters it clean, heats it with steam to the individually selected thermostat controlled tem-



YORK - SHIPLEY, INC.

YORK HEAT

OIL AND GAS BURNERS · BOILER-BURNER UNITS · WINTER AIR CONDITIONERS · OIL BURNING WATER HEATERS · HORIZONTAL ROTARY OIL BURNERS · LOW PRESSURE STEAM GENERATORS · HIGH PRESSURE STEAM GENERATORS

YORK, PENNSYLVANIA

December 1, 1952

AN OPEN LETTER TO AUTOMATIC HEATING DEALERS

On December 15, the key members of our distributing organization will meet in York to hear the complete York-Heat Merchandising Plan for 1953 and to see the new and improved models of automatic heating equipment that will make up York-Heat's 1953 line.

We wish that every automatic heating dealer could be present -- because many of our announcements will be new and revolutionary. Here are a few of the highlights:

1. Guarantee - York-Heat will announce a new warranty program that is possible only with time-tested, quality-built equipment.

2. New Products - Additional and improved models including complete heating systems will give dealers a full line of equipment that will reach all segments of the automatic heating market including the speculative builders.

3. New Merchandising Program - Completely new advertising and sales promotion program that will help dealers make more sales at a profit.

Our program theme for 1953 is again -- More Profits for the Dealer.

After leaving York, our distributor salesmen will be carrying the York-Heat story for 1953 to every dealer in the field -- but that will take time. If you want to be one of the first to hear the York-Heat Story, please tear off the coupon and mail it to me personally.

Yours for a more prosperous '53,

S. H. Shipley

S. H. Shipley, President

Mail this Today

S. H. Shipley, President
York-Shipley, Inc.
York 2, Pennsylvania

I want to be one of the first to hear York-Heat's 1953 Dealer Program.

Name_____ Company_____

Address_____ City_____ State_____

SHS

perature, then blows it back into the room with its steam operated turbine blower. No electricity is used in the system.

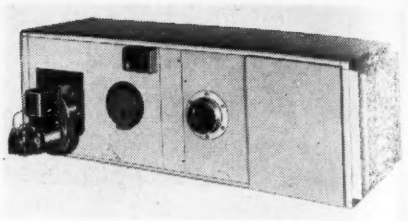
According to the manufacturer, each Swenco unit operating in the system is in effect an automatic heat meter constantly and accurately measuring the heat required to compensate for variable heat losses in the zone it controls, modulating in its operation from 1/20th of its capacity to full, producing only the heat required where and when it's wanted.

Made by: Swenson Thermal Research, Inc., 2100 East 55 St., Cleveland, Ohio.

Circle F54 on card

Luxaire horizontal Unit has 112,000 Btu output Rating

A LUXAIRE oilfired horizontal furnace with a 112,000 Btu rating has been placed on the market. Scheduled to be introduced at a later date are additional lines of Luxaire oilfired horizontal furnaces with higher ratings.



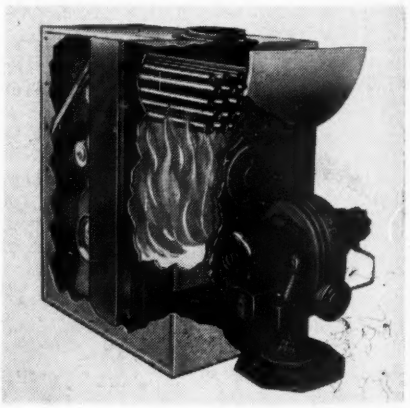
The unit was designed for both residential and commercial use. It can be suspended from the ceiling in garages, shops, schools, and offices. In homes it can be set on joists, hung from rafters in the attic, installed in closets or in the crawl space under the floor. The large, gas-tight steel heating element can be cleaned without lowering the unit or removing the casing.

Made by: C. A. Olsen Mfg. Co., Elyria, O.

Circle F55 on card

Radiant Utilities Line now lists winter air Conditioner

RADIANT UTILITIES CORP. has introduced a new oilfired winter air conditioner which is available in four models: Model OFEH, a suspended unit; standard floor Model OFE in



both flush and extended jackets; Model OFHB, Hi Boy and Model OFCF-70, Counterflow. Capacities range from 70,000 to 150,000 Btu.

The tubular construction of the winter air conditioner presents a large heating surface for the flue gases. The unit contains a high temperature combustion chamber, motor-driven blower unit and air filters. Each unit can be furnished with a Radiant oilburner flange mounted or with a pedestal.

Made by: Radiant Utilities Corp., 8809 18th Ave., Brooklyn 14, N. Y.

Circle F56 on card

So DIFFERENT
It gets U.S. Patent

SINCLAIR ANTI-RUST FUEL OIL

—with amazing rust inhibitor, RD-119®—is so different from "old-type" fuel oils it has been awarded a U. S. Patent. This great new product of Sinclair Research, when used regularly, *actually* protects against rust and corrosion that clog filters and burner nozzles—reducing service calls and building good will *for you!*

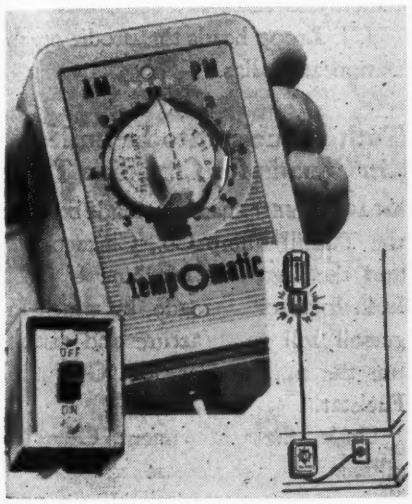
SINCLAIR
FUEL OIL WITH RD-119®

ANTI-RUST Super Flame ®

Temp-O-Matic Unit designed for day-night heat Control

TEMP-O-MATIC is a small electric heater with timer control which is placed underneath the thermostat for the purpose of automatically lowering room temperature at night and raising room temperature in the morning.

The Temp-O-Matic works entirely separate from the thermostat. It is connected merely by plugging it into an electrical outlet. The timer control can be set so that at night the heater automatically switches on. This causes the



temperature indicator on the thermostat to rise 6° to 10° which, in turn, shuts off the furnace until the room temperature lowers. At a specified time in the morning, the Temp-O-Matic thermostat heater clicks off and your furnace immediately starts heating the home.

Made by: Temp-O-Matic, 173 West Madison St., Chicago 2, Ill.

Circle F57 on card

New Iron Fireman horizontal pressure atomizer oil Furnace

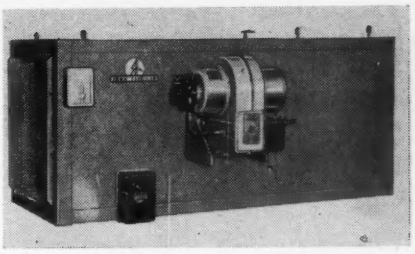
A HORIZONTAL PRESSURE atomizer oil-fired furnace, with 80,000 to 180,000 Btu at the bonnet, has been announced by Iron Fireman for heating homes or for commercial-industrial use as a unit heater.

The furnace is completely assembled and installed by suspension from the eyebolts, which are integral parts of the unit. Burner parts are supported within a heavy gauge frame. Both blower and motor are cradled in rubber to absorb vibration.

Filters of spun glass-type are provided; filter racks may be mounted on the top, bottom, end or either side of the furnace. An automatic feed type humidifier is optional equipment. Service door permits inspection.

A series of corrugated flue sections, nested side by side, concentrates a great amount of heating surface in the path of the blower. Low stack temperatures result. Heavy 12-gauge steel is used. Cabinet is finished in baked enamel of blue-green color.

Multiple units can be installed, con-

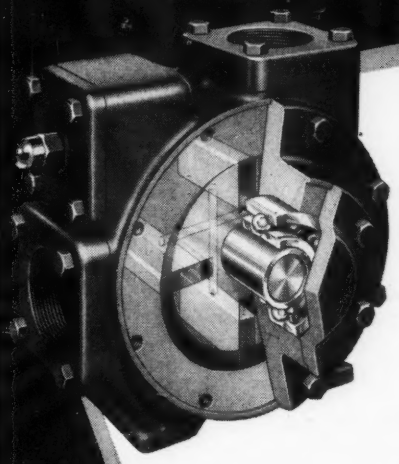


trolled by the individual thermostat located near each furnace.

Made by: Iron Fireman Mfg. Co., Cleveland 11, Ohio.

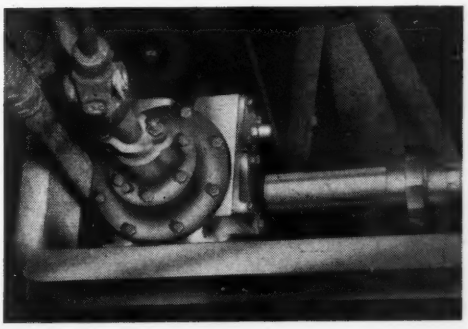
Circle F58 on card

BLACKMER *first choice* TRUCK PUMPS



First choice of oil marketers because Blackmer Truck Pumps deliver full-rated capacities of 40, 60 or 100 gallons per minute at easy engine speed.

- INSTANT PRIMING
- QUIET OPERATING
- PLASTIC VANES
- BALL BEARINGS
- HEAVY CONSTRUCTION
- EASY TO INSTALL



Get the facts

Read why Blackmer Truck Pumps are better. Write for Bulletin TP3A.

BLACKMER PUMP COMPANY GRAND RAPIDS MICHIGAN

(*Begins on page* 108)

home office, and Arnold Peterson, New York manager. Other White-Rodgers men present included: Joseph Newman, chairman of the board; H. F. Killinger; Edward Hartnett and Charles Perpenn.

M-H sets training Schedule for instruction Courses

SCHEDULES for industrial instruments maintenance and repair courses for the first half of 1953 have been announced by Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. The Industrial Division of the company has extended what for years was a 13-weeks comprehensive class into a 14-weeks course. The change was necessary to include instruction of new devices and models.

The regular five-weeks courses will start January 5, February 16, March 30, May 11 and June 8. The new 14-weeks comprehensive class will be held from February 16 to May 22.

The company has added instruction in several new products, including relays, differential converters, the Tel-O-Set line and other instruments, components and supplies.

I'm glad I decided to sell the
Nu-Way
OIL BURNER
... because now I'm enjoying my best profit year
And with Nu-Way you'll have the chance to handle a complete line of oil burners for both domestic and commercial use with capacities from .5 G. P. H. to 20 G. P. H. Also the Nu-Way Oil Burner with exclusive patented features is advertised consistently in America's leading home magazines. In addition you are provided with a wide variety of local selling aids . . . newspaper ad mats, mounted displays, direct mail pieces, booklets and catalogs. Plan now to make the "right decision" . . . sell Nu-Way.
MR. DEALER: See your supplier today for complete information, or write . . .
Nu-Way
OIL HEATING EQUIPMENT
THE NU-WAY CORPORATION
ROCK ISLAND, ILLINOIS
Sold through Jobbers and Distributors. Also Special Applications for Furnace and Boiler Manufacturers
"Automatic Oil Heat Exclusively Since 1921"

Brodie Meter shifts division Headquarters to Dallas, Texas

RALPH N. BRODIE CO., INC., has recently moved its mid-continent division offices to larger quarters at 167 Parkhouse St., Dallas, Texas. In addition to modern air conditioned offices, the new location incorporates complete service and stockroom facilities for handling Brodie meters and parts. Ample parking area is provided for customers and visitors.

J. J. Kropp heads the Brodie organization at Dallas.

Tuthill Fuelstat to be built in Canada for Canadian Trade

AN AGREEMENT has been made between the Tuthill Pump Co., Chicago, Ill., and the Ingersoll Machine & Tool, Ltd., Ingersoll, Canada, by which Ingersoll will manufacture and distribute the new Model 30A5G Tuthill Fuelstat.

Under the arrangement, Canadian oilburner manufacturers are assured of close cooperation on their pump requirements through the service provided by the Ingersoll organization throughout Canada. Ingersoll will also distribute the general line of Tuthill industrial pumps.

Trane building Laboratory to examine "Weather Magic"

A MILLION DOLLAR "House of Weather Magic" is being built in La Crosse, Wisc., by The Trane Co., Chicago 11, Ill. The new research and testing laboratory will include facilities for duplicating temperature, humidity, pressure and air movement conditions anywhere on the globe, from equatorial mines to arctic flights. It will probably be the largest in the world devoted primarily to heat exchange.

Special features of the laboratory will include model rooms to study heating, cooling, ventilation and humidity control for schools, hospitals, hotels, offices and homes. There will also be "cold rooms" to create sub-zero conditions.

Wind tunnels and hydraulic equip-

No Greater Value Ever Than These Complete* Fuel Oil Trucks!

IMMEDIATE DELIVERY ANYWHERE in the U. S. A. - Trades accepted - Terms arranged

1000 GALLON — 2 compartment tank; fully skirted, top shrouding; 1½" ticket printer (your choice); 125' 1¼" hose and electric reel; 1953 Dodge 1½ ton with 7:50x20 8 ply tires; complete $3995.00

1300 GALLON — 2 compartment tank; equipped same as above: 1953 Dodge 2 ton with 8:25x20 10 ply tires; complete $4380.00

1600 GALLON — 2 compartment tank; equipped same as above: 1953 Dodge 2½ ton with 9:00x20 10 ply tires; complete $5125.00

2000 GALLON — 2 compartment tank; equipped with 2" ticket printing meter (your choice); 125' 1¼" hose and electric or "Fluid Drive" reel; 1953 Dodge 3 ton with 10:00x20 12 ply tires; complete $6465.00

2400 GALLON — 2 compartment tank; equipped same as above; 1953 Dodge 3½-ton with 11:00x20 12 ply tires; complete $7330.00

3300 GALLON — 2 compartment tank; equipped with 2" ticket printing meter (your choice); 125' 1½" hose and electric or "Fluid Drive" reel; 1953 Dodge Model YX, 4 ton with tandem dual rear; 10:00x20 12 ply tires all around; 100% air brakes; custom cab; all marker, running and signal lights included; complete $11350.00

REAR INSTALLED EQUIPMENT AVAILABLE ON ALL SIZES
Other sizes, prices on request — All sales subject to 8% Federal Tax

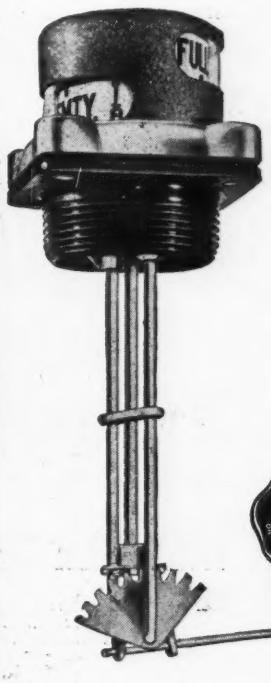
✱ *Includes chassis, tank, pumping and metering equipment*

Decker Brothers

Send for FREE Catalog FO

300 Lincoln Avenue
HAWTHORNE N. J.
Hawthorne 7-2100-2101-2102

STOP nuisance calls with Rochester "dual-dial" GAUGES



Don't let nuisance calls eat up your time and profits!

You can easily assure years of *trouble-free* service with Rochester DUAL-DIAL Gauges. No fumes can get out to bother your customers. The solid, pressure-tight head construction provides positive *leakproof* protection—even under pressure.

You can make tank checking and filling a snap, too . . . the easy-to-read "dual-dial" can be seen from both front and back.

Featuring permanent magnetic indication, Rochester DUAL-DIALS are Underwriters' listed. More than 2½ million are now in use. They're easy to install and stocked by leading wholesalers everywhere for all standard basement oil burner storage tanks. Rochester Manufacturing Co., Inc., 8 Rockwood Street, Rochester 10, New York.

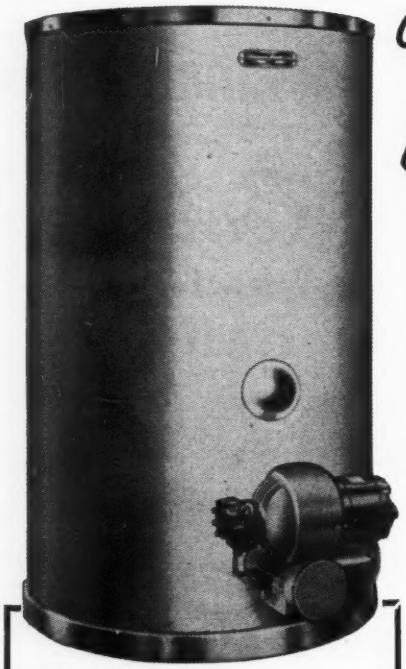
Rochester
MANUFACTURING COMPANY, INC.
DIAL THERMOMETERS GAUGES AMMETERS

ROCHESTER DEPENDABLE ACCURACY GAUGES

ment will be used to measure the flow of air and liquids and the interchange of heat between gases and liquids. A sound isolated "quiet room" will be used for measurement and study of the noise levels of fans, motors and moving air. A battery of calculators with computations.

One of the most important parts of the laboratory's equipment will be complete calibration equipment for checking and maintaining accuracy of the many scientific instruments used in laboratory work.

SHEPHARD BOILERS & HOT WATER HEATERS



Give You...

PROVEN PERFORMANCE PLUS . . .

INSTALLATION PROFITS

Here is your answer to the small home market . . . The SHEPHARD Boilers and Hot Water Heaters incorporate the *Percolating Action* that gives continuous efficiency and economy. This action prevents the deposit of lime, scale and sediment on heating surfaces. When you sell and install SHEPHARD Units you offer your customers . . .

Check the many SHEPHARD Features:

- ASME Code Construction
- Removable Screw Type Fittings
- Heavy Boiler Plate Construction
- Two Inch Rock Wool Insulation to eliminate Stand By Loss
- Hydrostatic Tested—300 lbs.
- All Copper Coil Tankless Heater for Domestic Hot Water
- Six Different Sizes
- Standard Size Fittings

● CONVENIENCE

The convenience of having plenty of hot water; winter or summer. That's a real blessing to any family and a good sales point.

● COMFORT

Thermostatically controlled, the SHEPHARD *Percolating Action* will keep your Customers' Homes "as snug as a bug in a rug." Add to this the important feature of . . .

● ECONOMY

All this comfort and convenience is your customers for a small initial cost while the *Percolating Action* of SHEPHARD Units show economies of 35% to 85% in fuel. All these advantages add up to SALES and MORE INSTALLATION PROFITS FOR YOU.

SHEPHARD Percolating Action

Wire or Write Today — *You can qualify as an exclusive dealer or jobber in your territory. Send for full information and prices.*

Shephard HEATER CO. INC.

951 SYCAMORE AVE., TERRE HAUTE, IND.

Iron Fireman conducts School for Standard Oil (Ohio) Men

IRON FIREMAN MFG. CO., Cleveland, O., recently conducted a two-day school for thirty Standard Oil (Ohio) engineers and mechanics. The class concentrated on the operation and maintenance of industrial oilburners for firing heavy oil. Instruction covered both Iron Fireman and Petro burners.

The school was held at the Iron Fireman Cleveland plant. Instructors were: S. H. Beach, service engineering manager; J. E. Atchison, director of application and service engineering and J. R. Crews, sales manager, Petro Division.

Sinclair, through Subsidiary, acquires Baltimore Concern

SINCLAIR REFINING CO., New York 20, N. Y., through its subsidiary, Sherwood Brothers, Inc., has acquired the business of The Free State Oil Co., and its affiliate, the Oil Burners Distributing Co., distributors of fueloil and burners in Baltimore, Md.

Fitzgibbons has Catalog on R-Z-U Junior boiler Line

A SIX-PAGE CATALOG JR-10-1 describes the improved R-Z-U Junior steel boiler line, made by Fitzgibbons Boiler Co., New York 17, N. Y.

Features of the R-Z-U Junior catalog are: full specifications and dimensional data when fired by oil, gas, stoker or hand-fired coal; outline drawings for all sizes; ratings for the new Tanksaver and Tankheater domestic hot water coils and photographs to show the internal design, construction

5 FREE
Technical Bulletins for IMPROVING the EFFICIENCY of BURNER INSTALLATION—SERVICE

1. **"GOOD PROFITS IN MODERNIZATION"**
   How to set up a program beneficial to your customer, profitable for you — and good for your industry.
2. **"BURNING OIL COMPLETELY"**
   Why properly sized combustion chambers of the proper materials are a "must" for efficient installations.
3. **"NOW YOU CAN 'SEE' THE AIR"**
   A complete description of the new principle of mating air and oil patterns for higher efficiency, the knowledge of which will enable you to get the highest possible CO_2.
4. **"YOU'VE GOT TO KNOW NOZZLES"**
   There is a right nozzle for every oil burner. A thought-provoking article which will help you.
5. **"DRAFT CONTROL IS IMPORTANT"**
   The proper location and the great importance of accurate draft control is described in this article.

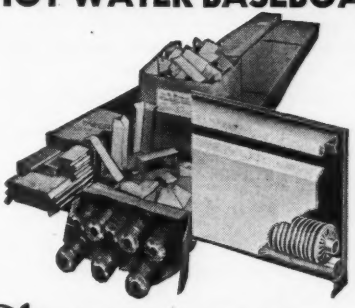
Write for your FREE bulletins NOW

BOSTON MACHINE WORKS COMPANY
Oil Heating Supplies Division, Manufacturers, Lynn, Mass.

JOSS BROTHERS say . . . "here in upper New York near the Canadian Border, Floorlevel's economical dependability make installations both a joy and a profit."

Donald and Joss
Alford, Gailey

FLOORLEVEL
HOT WATER BASEBOARD HEATING PACKAGE



including convenient 10 ft. lengths of fin-type heating element, front panel and top moulding. Also wall brackets, inside and outside corners and splices.

GENERAL Automatic

GENERAL AUTOMATIC PRODUCTS CORPORATION
2300 Sinclair Lane **Baltimore 13, Maryland**

"BUILT BY BUCKEYE —best guarantee you can get!"

If you're looking for *better* Oil Burner Accessories—look for the BUCKEYE name. Buckeye-built equipment does an efficient job year after year. The Foot Valve shown here is a good example. It has seats and discs machined to a glass-like surface with discs lapped to the seat by *hand*. When you want better installation jobs—use better-built BUCKEYE accessories.

Buckeye

No. 439
Foot Valve

BUCKEYE IRON & BRASS WORKS, Dept. F, Box 883, Dayton 1, Ohio

Strainers • Sludge Pumps • Foot Valves • Fill Boxes
Check Valves • Vents • Shut-Off Valves • Bushings

GORTON VALVES
MAKE SATISFIED CUSTOMERS

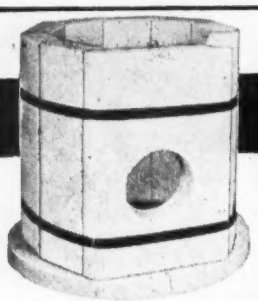
With GORTON VALVES every radiator is made to heat EVENLY and QUICKLY with OUNCES of vapor . . . instead of POUNDS of pressure.

For steam mains and unit heaters

For radiators

WRITE TODAY FOR LITERATURE AND PRICES

GORTON HEATING CORPORATION
Since 1887 — Manufacturers of Heating Equipment
CRANFORD • NEW JERSEY



FOR SATISFIED CUSTOMERS — INSTALL . . .

AMERICAN COMBUSTION CHAMBERS

100% "KILN-CURED" LIGHTWEIGHT REFRACTORIES

Equipment manufacturers are invited to bring their special design problems to us.

HIGH QUALITY

American Chambers are made from the finest, high grade refractory materials combined with proper "Kiln-curing". They will withstand 2500 degree temperatures and will not crumble in water.

EASY INSTALLATION

Controlled manufacturing and careful design of American Chambers makes for fast and easy installation. The flexible pieces fit together with a minimum of effort.

TOP PERFORMANCE

Because of the high quality of materials used in American Chambers they provide faster heat-ups, quieter burner operation and savings in fuel.

AMERICAN

JOBBERS: Write today for price sheet.

AMERICAN CLAY FORMING CO.

TIFFIN, OHIO

and features of the boiler.

The copy highlights the improvements in the R-Z-U Junior, including a lower overall height and water line; gas-tight, heavy cast iron front flue door; side-compartments water gauge and try-cocks; relocated control tappings for easier hook-up; re-designed rear smokebox with top outlet to eliminate need for rear clearance and an all-steel flush jacket with "Fiberglas."

Thatcher Furnace Co. offers envelope Stuffers and Folder

ENVELOPE STUFFERS, colorfully illustrated, and a four-page folder featuring the new Thatcher 525 Hot Water Boiler are now being made available to the heating trade by the Thatcher Furnace Co., Garwood, N. J.

Separate envelope stuffers display Thatcher's line of oil- and gas-fired forced-air furnaces and are properly sized and light enough to be included in monthly statement and promotional mailings. Room is provided on the back for the sender's return address.

The folder on the 525 Series Boiler shows a cutaway picture of the unit and points out features to show prospective buyers.

Buckeye distributes full-line Catalog to wholesale Outlets

BUCKEYE FURNACE PIPE CO., Columbus 8, O., has distributed to all Buckeye wholesale outlets, a new, handy-

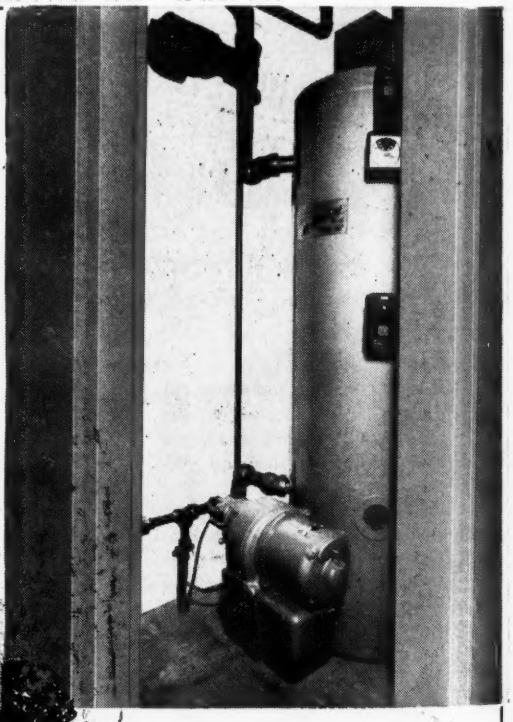
the Mt Hawley "BUDGETEER"

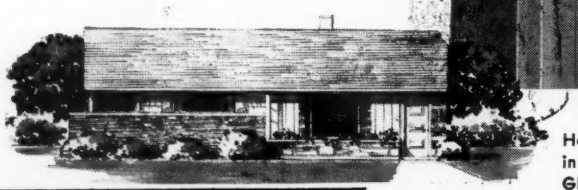
Solves Space Problem At Des Plaines Housing Project -- 250 Units Being Installed

Yes, here's convincing proof that the Mt. Hawley "BUDGETEER" is the ideal high efficiency, space saving heating unit! H. W. Keppner, Cicero, Ill., heating contractor for Manilow Construction Co., Chicago builders, specified and is installing 250 Mt. Hawley "BUDGETEERS" in the Des Plaines, Ill. housing project. Why don't you write—today—asking for full information on the Mt. Hawley "BUDGETEER." It's THE answer to today's need for a high efficiency heating unit that saves space!

Features

- Meets FHA and underwriters requirements for closet installations.
- Fits in 22" x 44" closet with ample room for burner removal and servicing.
- Comes completely jacketed, ready to set in place—no assembly required.
- Ideal for any form of hot water heat—quiet and efficient.





Here's a view of a "BUDGETEER" installed in one of the Des Plaines units. The "BUDGETEER" can be converted from oil to any gas in a short time. This is 1 of 9 popular Mt. Hawley models. For literature describing the entire Mt. Hawley line, write Dept. 6A.

MHM CoM Mt Hawley MFG. CO.

Mt. Hawley Airport, Peoria 4, Illinois

Rely on... PREFERRED DRAFT-A-JUSTORS

— for stabilizing DRAFT CONDITIONS!

More than 1,000,000 installations prove Preferred does a better job on all types of fuel. The Draft-A-Justor is completely automatic and keeps a uniform pull on the fire box even when outside weather conditions increase the draft beyond desired amount. Easy to set, quick to install . . . its' adjustable features make the Draft-A-Justor a fast selling item.

Available in three sizes to meet the needs of any job from 5" to 13" smoke pipes. Write for details today.

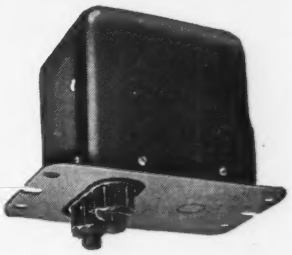
Also available—data on commercial and industrial sizes.

PREFERRED UTILITIES MFG. CORP.
1860 BROADWAY · NEW YORK 23, N. Y.

017

DONGAN TRANSFORMERS

THEY INSURE DEPENDABLE PERFORMANCE



ON leading makes of oil-burners Dongan Transformers have for years been standard equipment. This is because of their demonstrated ability to render dependable service. Acquaint yourself with Dongan's special construction features. It's the transformer you'll want.

Voltages from 5,000 to 20,000.
A variety of sizes and mountings

WRITE FOR *Literature*

Dongan Electric Manufacturing Co.
2981 Franklin Detroit 7, Mich.
"The Dongan Line Since 1909"

Eliminate VIBRATION...

LOVEJOY Type DX Double Flex FLEXIBLE COUPLINGS

Build smooth, quiet operation, efficient performance, and enduring service life into your fans, blowers, and pumps with LOVEJOY Flexible Couplings. Quickly installed. Easily serviced. Ideal for close-quarter applications. Special rubber center increases flexibility . . . dampens out noise and vibration. Most manufacturers supply blowers with Lovejoy jaws on blower hubs at no extra cost.

• Investigate today. Send for literature on complete line of Lovejoy Double Flex Flexible Couplings.

Also Mfrs. of Lovejoy Universal Joints and Lovejoy Variable Speed Transmissions.

LOVEJOY FLEXIBLE COUPLING CO.

5012 W. Lake St. • Chicago 44, Ill.

HEAT-TIMER

valves correct those *Hard to Balance* one pipe steam systems

Brass Chrome-plated

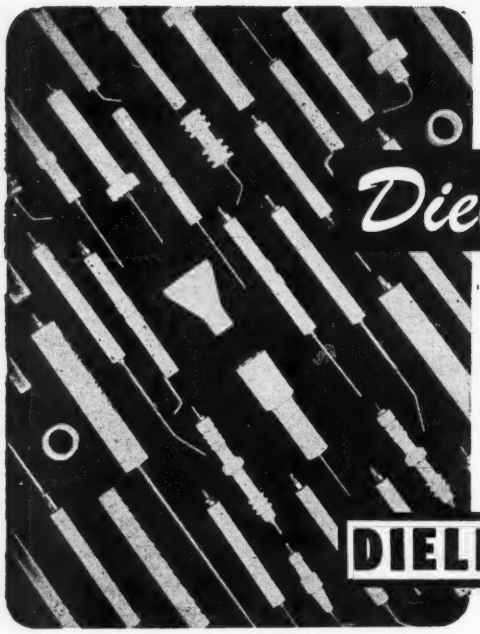
The Radiator Air Valve with built-in Thermostat

THERMOVALVE . . . automatically maintains individual temperature for each room. Just turn dial to desired temperature. Precision made. Noiseless operation. Works on any one pipe steam system without interfering with existing controls. Angle or straight shank. **List $3.95**

VARIVALVE . . . a Quick-Vent Valve that gets heat fast to those "hard to heat" Rooms, Mains, Risers. Saves you time. Customer satisfaction. Sturdy, brass chromeplated, precision made with venting orifice variable 0" to 5/16". Angle or straight shank. **List $3.45**

Request for information or literature sent by return mail.

HEAT-TIMER CORP.
520 Broadway, New York 12, N. Y.



85% YEAR AFTER YEAR OF ALL NEW OIL BURNERS ARE EQUIPPED WITH...

Dielectric IGNITION ELECTRODES

For many years DIELECTRIC ignition assemblies have been the overwhelming choice for new burners or as replacements. They're ahead for 5 big reasons:

BETTER SERVICE ON NEW DESIGNS • QUICK DELIVERY OF STANDARD PARTS
AUTOMATIC PRECISION PRODUCTION • HUNDREDS OF STYLES • LOW PRICES

DIELECTRIC electrodes are the finest available in standard types and in special sizes and shapes, all UNDERWRITERS' approved.

DIELECTRIC also makes high tension cable assemblies and bus bars for transformer and electrode layouts for any burner hookup.

Go DIELECTRIC and you'll never again settle for lesser quality or service.

DIELECTRIC PRODUCTS CO., Inc., 125 Virginia Ave., Jersey City 5, N. J.

size, full-line catalog.

The catalog lists Buckeye's forced air system, four-inch system fittings, and Snap Lock round pipe, elbows and angles. The complete line of Buckeye ducts and fittings are illustrated in the catalog.

Atkomatic Bulletin about electrically operated Valve

INFORMATION on industrial applications of Atkomatic Solenoid Valves is now available in the form of bulletins prepared by The Atkomatic Valve Co., 545 West Abbott St., Indianapolis, Ind.

The latest bulletin released concerns Atkomatic Solenoid Valves which are now available for pressures up to 3,000 pounds psi. Adjustable timing on the closing stroke is available to pressures of 300 psi. This feature, the manufacturer says in its pamphlet, eliminates shock on supply lines, particularly on hydraulic operations. Atkomatic Solenoid Valves are packless, easily maintained and are designed to handle hydraulic operations, oil, water, steam, air, gases and any media not harmful to bronze.

No Poor Months!

Too many people need oil burner modernization for there ever to be any poor months for our franchised dealers. The work can be done without heat being off more than 3 hours, and when you finish even the oldest, poorest heating plants will be operating at or above 80% with a #1 smoke.

You can sell hundreds of such modernization jobs yearly and make as much or more than you make on new burner sales.

You will have no competition because we award protected franchise. We provide comprehensive sales aids, full instructions. The patented Heat-Lock is 1 of 5 products used. Details without obligation.

NATIONAL FUEL CONSERVATION CO., INC.
P. O. BOX 750, WHITE PLAINS, NEW YORK

Two types National Baseboard described and illustrated

TWO TYPES of National Art Baseboard, a replacement for customary wooden baseboard or an efficient residential heating medium, are described and illustrated in Catalog No. 598, now available from The National Radiator Co., Johnstown, Pa.

Type BF is shown as the most conventional type for installation against plaster after a house has been built. It extends 2¼" into the room from the plaster wall. Type BR is for semi-recessed installation. It is generally installed during building construction.

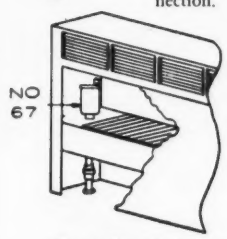
Having approved I-B-R ratings, 8 ft. lengths of National Art Baseboard are generally installed in forced hot water heating systems, but minimum lengths can be used with steam.

Catalog No. 598 gives roughing-in dimensions.

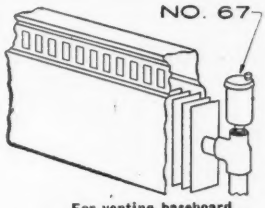
—For fully automatic air venting

No. 67 AUTO-VENT

Designed for limited space installations on hot water heating systems. Self-closing, float-operated valve gives positive action for continuous venting. Non-ferrous metals. No air chamber required. Pressures up to 30 lbs. Vertical mounting only. Size 3-3/16" x 1½" with ⅛" I. P. male connection. Prompt delivery from your jobber.



For venting convector radiators



For venting baseboard radiation

MAID-O-MIST INC.

AUTOMATIC HUMIDIFIERS

3221 N. Pulaski Rd., Chicago 41, Ill.

Nozzle TIPS

Prevent Nozzle Clogging Caused by Sludge with

DELAVAN SLUDGE SOLVENT

Sell DELAVAN SLUDGE SOLVENT for every tank refill—and stop nozzle clogging. Disperses sludge, emulsifies water. 100% active, contains no filler. (An excellent profit item, too.)

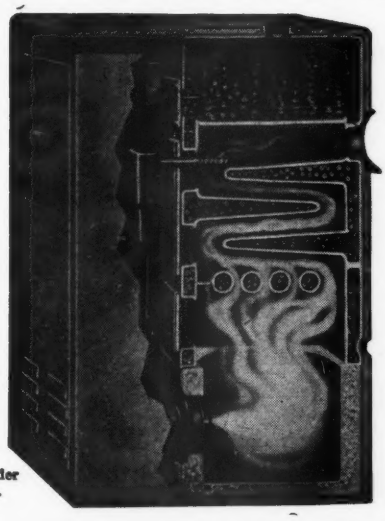
WRITE FOR BULLETIN 248

DELAVAN MANUFACTURING CO.

3009 SIXTH AVE., DES MOINES 13, IOWA

Steel HEATING UNIT

5 YEAR GUARANTEE AGAINST LEAKS



Licensed under U. S. Pat.

We have just appointed Morris Company as sole distributor, covering the territory of the State of New York and Northern New Jersey, with new offices at 31 East 23rd Street, New York 10, New York—phone GRamercy 7-8052.

Magic-HEAT

Product of **MARIETTA METAL PRODUCTS CORPORATION**
MARIETTA, PENNA.

DEPENDABLE PERFORMANCE

An Acme Electric transformer equipped oil burner, is visual assurance of dependable ignition performance. Heavy duty design, impregnated coils, sealed in heat dissipating compound.

ACME ELECTRIC CORPORATION

5012 WATER ST. **CUBA, N. Y.**

Acme ACME Electric
TRANSFORMERS

P. M. Motor Service has new Plant in Hudson Valley Area

P. M. MOTOR SERVICE, Poughkeepsie, N. Y., now offers the advantages of a new and modern shop to the petroleum men of the Hudson Valley area. The owner, Stanley Post, stated that the larger up-to-date quarters offers exceptionally complete tank truck service. As authorized agents for Renick & Mahoney, Inc., they carry truck tanks as well as a full selection of other important parts and equipment in stock at all times. He added further, that

with the combination of readily available equipment and the new modern shop, such jobs as mounting truck tanks, installation of pumps, reels and hose, will be handled more efficiently.

❖

Advertise Right

(*Begins on page 48*)

come to you as a result of advertising. The prospect who answers your ad may very well answer your competitor's ad as well. If you don't get to him at once, you probably are going to be too late.

In the introductory paragraphs of this article the writer mentioned the "old-time religion" of personal selling. A basic tenet of that religion has always been that the prospects you dig up by personal canvassing are ten times better than the prospect who answers an advertisement. Why? Because he is your prospect, you created him, he didn't create himself by answering your ad.

If that is true, then why advertise at all? Because the personal canvasser will always find his job easier if he is handling an advertised product. One of the true functions of advertising generally is to create a welcome for your salesman. If your advertising can make every home owner or prospective home builder in your territory aware of the fact that your company handles a nationally advertised brand of products, your canvassers or canvassing salesmen will find half their job done. So don't judge your advertising by the number of 'phone calls or letters you receive from prospects. Judge it instead by the effectiveness of your overall sales operation.

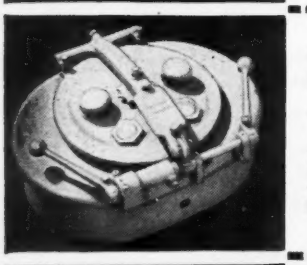
FOR QUICK-OPENING, TIGHT-CLOSING, POSITIVE-LOCKING MANHOLES

SPECIFY "Manholes by Philadelphia Valve"

no matter who builds your tank trucks

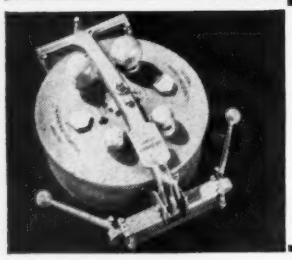
Standard Manhole

Size 12" x 16" with 6½", 8", or 10" fill opening. A slight turn of locking ring opens and closes cover.



Self-Closing Manhole

Size 12" x 16" with 10" fill opening. Self-closing, with positive locking device. Opened by raising lever on either side.



14" Diameter Self-Closing Manhole

For heavy fuel-oil tanks. Self-closing, with positive locking device. To open, lift either lock arm and raise cap.

Write the words "Manholes by Philadelphia Valve" into your order. These quick-opening manholes are absolutely tight. They surpass every fire underwriter's standard. They open and close easily and quickly. They are built to outlast the tank.

Each type of manhole is simple, strong, and foolproof. Covers are leakproof. Covers and plugs are of malleable iron or heat-treated aluminum. No cast iron is used. "5-in-1" vents automatically close if truck upsets, and will release under 6 lbs. pressure to prevent explosion in case of fire. Gaskets are easy to keep tight.

Philadelphia Valve manholes are standard with many major oil companies from coast to coast. Make them standard on *your* tank trucks, too!

Send for catalog 170 for descriptions and engineering drawings of all Philadelphia Valve Company products.

PHILADELPHIA VALVE COMPANY

3413 Aramingo Avenue, Philadelphia 34, Pa.

Pacific Coast Distributors:

Oil Marketing Equipment Co., 325 Fremont Street, San Francisco 5, California
Howard Supply Co., 5125 Santa Fe Avenue, Los Angeles 11, California

IMMEDIATE DELIVERY

IN STOCK

STANDARD DESIGN

TRUCK TANKS

1200 and 2000 GALLONS

also

PUMPS • METERS • HOSE • REELS

at

Poughkeepsie, N. Y. — Binghamton, N. Y.

Kingston, N. Y. — Lindenhurst, N. Y.

DETAILS ON REQUEST

RENICK & MAHONEY, INC.

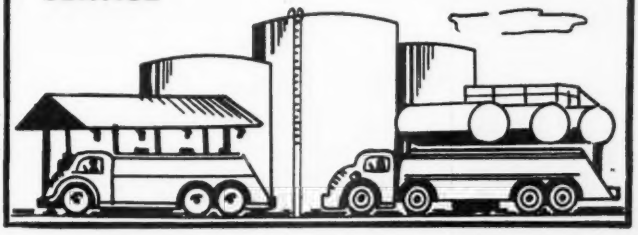
380 Second Avenue (at 22nd St.)

New York 10, N. Y.

Telephone ALgonquin 4-4202

R&M SERVICE

Complete Equipment for the Oil Trade



For SALES and SERVICE on VIKING ROTARY PUMPS

Call Your Nearest

VIKING REPRESENTATIVE

The Viking Pump Company is represented by a nation-wide sales and service organization in key cities from coast to coast . . . from Canada to the Gulf. Is your pumping installation operating at high efficiency? Do you have a pump maintenance problem? Do you have a new pumping application? Write or call the Viking representative nearest your plant for service.

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Phone Vernon 9065

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549 W. Washington Blvd.
Phone State 2-6818

CLEVELAND 13
J. A. SINDEN
310 Marshall Bldg.
Phone Cherry 1-0687

DALLAS
O. W. PHILLIPS
2175 W. Commerce St.
Phone Randolph 3638

INDIANAPOLIS 25
C. D. SADLER
467 Madison Avenue
Phone Plaza 8349

KANSAS CITY 8
F. J. PINNEY
1907 Main Street
Phone Harrison 8033

LOS ANGELES 58
E. E. BURTON
4432 Long Beach Avenue
Phone Adams 3-8165

MILWAUKEE 3
C. F. MULLENS
610 West Michigan St.
Phone Daly 8-0807

NEW YORK 18
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Phone Longacre 3-3816

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WILLBORN BROS.
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BIRMINGHAM 5
PUMP SHOP, INC.
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BOISE
OLSON MFG. CO.
4000 Warm Springs Ave.

BOSTON 10
HAYES PUMP & MACH. CO.
125 Purchase St.

BUFFALO 10
ROOT, NEAL CO.
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214 Vine Street

DAYTON 2, OHIO
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VAN PRAAG EQUIP. & MFG.
Rt. 48, ½ Mile East Rt. 51

DENVER 16
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900-910 St. Charles Street
Branches: Dallas, San Antonio, Edinburg and Kilgore

LOUISVILLE 2
NEILL LAVIELLE SUP. CO.
595 West Main Street

MEMPHIS 3
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CHAS. WHEATLEY CO.
414 So. Detroit Ave.

VIKING — AN HONORED NAME IN PUMPING

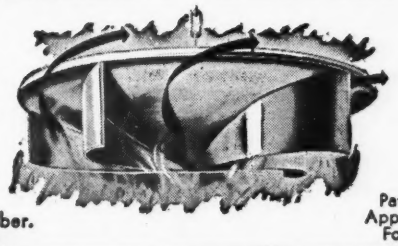
See Our Catalog In SWEETS

VIKING PUMP CO. Cedar Falls, Iowa

DON'T JUST BAFFLE! GET SWIRLING ACTION TOO-

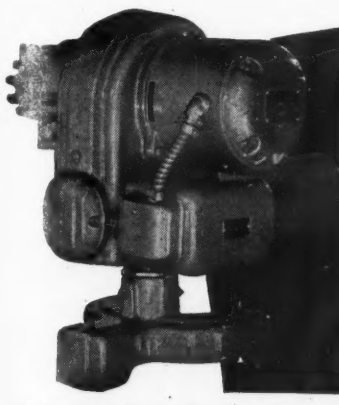
Every Conversion needs a FIRE-SWIRL BAFFLE.

Get the facts, clip this to your letterhead, or see your jobber.



Pat. Appl'd For

FIRE-SWIRL — ZEH COMPANY INC., PASSAIC, N.J.



Rexoil

THE OIL BURNER THAT DOES MORE . . . DOES IT BETTER . . . AT LESS COST

REF-REXOIL, Inc.

37 Carroll St., Buffalo, N. Y.

Mfgrs. of Oil Burners, Boilers, Furnaces

fueloil & oilheat

Examination

(*Begins on page 84*)

to the fireboxes in case of flame failure. On installations having boilers fired at higher rates than, say, 50 gph, how soon should the oil flow to the fireboxes be turned off after the flame-monitoring devices give their flame-out signal? Assume instant control response to flame-out.

A. Within 90 seconds.
B. Within three to five minutes.
C. Within two to four seconds.
D. Within 10 to 15 minutes.

Question 23—The pump drawing No. 6 oil from the outside tank of this big greenhouse job does not get oil fast enough and easily enough, according to the owner. He asks you which of these items could be causing the trouble:

A. The oil in the outside tank is only 120°F. and is causing the vacuum at the oil-pump inlet to be 8". The oil should come in from outside at a minimum temperature of 160° to reduce this vacuum to zero.

B. The suction line has bad air leaks.

C. A new oil pump is needed because, tested by closing its suction line valve for half a minute, the old pump develops a maximum vacuum of only 26".

D. The oil pump shaft speed is 180 rpm. Running the pump much more slowly will end the trouble.

Question 24—You have to produce 900 horsepower from a modern water-wall, watertube boiler rated at 650 horsepower. Which of these firing rates will you aim to use?

A. Fire from 30 to 45 gph.
B. Fire from 100 to 150 gph.
C. Fire from 250 to 350 gph.
D. Fire from 600 to 750 gph.

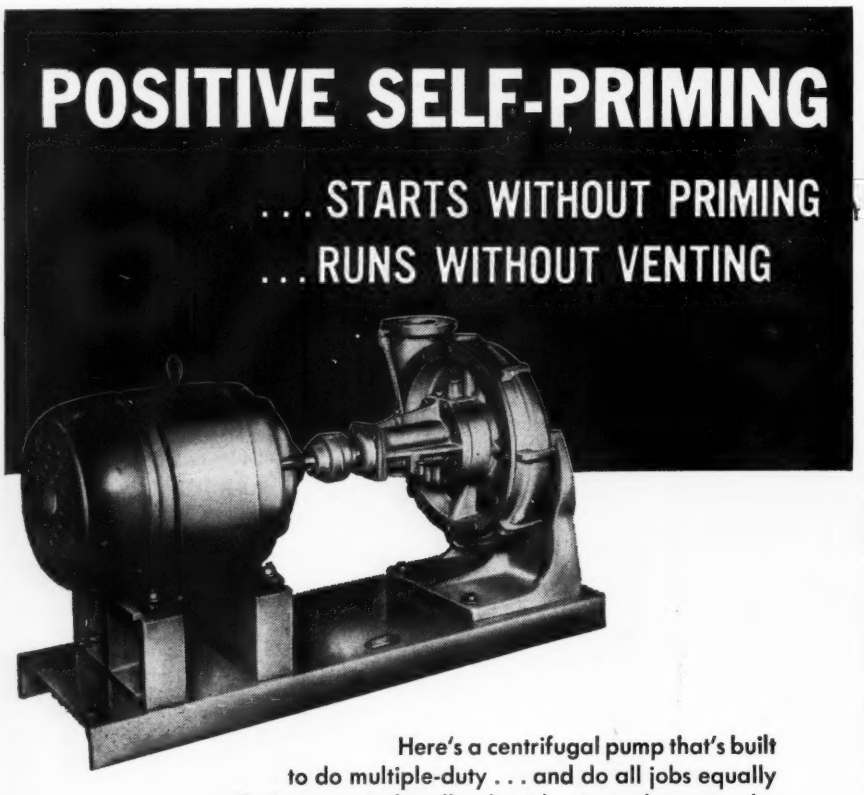
Question 25—Installed precisely in accordance with its manufacturer's instructions, according to its owner this burner for three years has failed to produce enough steam for his process-steam load. The dealer who installed the burner tested it and reported it wonderfully efficient. But the owner swears his 150 horsepower boiler produces less than 100 horsepower, and efforts to increase the flame size lead to terrific amounts of chimney smoke. Here are the readings you get when you test the job with the burner adjusted for its full-blast flame and the smokepipe dampers and regulators set for maximum chimney draft: 13¼% CO_2, 345° stack temperature, #5 smoke by Shell scale, .15" smokepipe draft, .06" over-fire draft. Which of the following items might indicate the trouble?

A. The only thing needed is greater smoke outlet draft, for the draft readings are those of a good-sized domestic job, not a 150 hp boiler installation.

B. Combustion is exceedingly poor because of poor atomization, insufficient oil heating, firebox shortcomings, or something similar to these.

C. The combustion test readings prove the boiler is greatly undersize for the load the owner wants to put on it. He needs a larger boiler!

D. Greatly excessive chimney draft is "pulling the heat out of the boiler." What's needed is modern equipment to reduce and control the over-fire draft and smoke outlet draft. To carry the load, install a modern system of over-fire draft control!



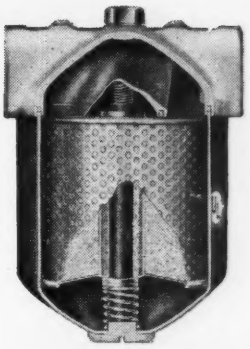
Here's a centrifugal pump that's built to do multiple-duty . . . and do all jobs equally well. Because it handles liquid, air and vapor, the Roto-Prime Centrifugal excels in stripping, transferring and loading operations. By using Roto-Primes for such multiple service, savings of 30 to 50% in pumping equipment costs can be realized. And with their simple, trouble-free construction, Roto-Primes cut down servicing headaches and maintenance costs.

Furnished complete with base, electric motor, coupling, and mechanical seal. Write today for the complete Roto-Prime Centrifugal story . . . for pump facts you won't want to miss.

Gilbarco

Gilbert & Barker Mfg. Co. West Springfield, Mass., Toronto, Canada

Use the Filter Approved by 21 Oil Burner Manufacturers



Fram Fuel Oil Filters protect oil burner pump and nozzles from damage by dirt, rust, scale and water in fuel. • protect YOU from costly "nuisance" service calls. • are simple to install, need almost no maintenance. • are designed specifically for filtration of domestic oil burner fuels.

Write for complete details TODAY!

Fram Fuel Oil Filters are available in capacities of 2000, 4000 and 6000 gallons of oil consumed per year. Write to: FRAM CORPORATION, Providence 16, R. I.

FRAM FUEL OIL FILTERS

Names in the News

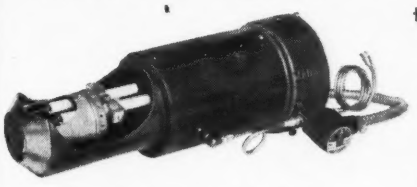
(*Begins on page 6*)

J. Roy Knox has been elected vice-president, U.S. Division sales and *E. J. Grady* has been elected vice-president, Pacific Boiler, both divisions of U.S. Radiator Corp., Detroit 26, Mich. Knox has been general sales manager of the company's U.S. Division for the past three years, prior to which he was manager of its Pittsburgh branch. Grady has been general sales manager of the Pacific Boiler division since 1946.

H. Forrest Oakes has been appointed by Norge Heat Div., Kalamazoo, Mich., regional sales manager for the Southwest territory which includes southern Illinois, southern Indiana, Kansas, Missouri, Oklahoma, Texas, Arkansas, Louisiana and Mississippi. Oakes formerly was Midwestern sales representative for heating equipment for Ingersoll Products Div., Borg-Warner Corp. Prior to this, he was Western advertising manager for *Snips* Magazine.

Profits Plus Satisfied Oil Customers

Yours with the Madsen Shell Converter, incorporating the Shell Combustion Head.



Write today—Dealers Only.

Fuel savings up to 36%.

•

Installed in one hours time on most gun type oil burners.

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No adjustments.

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Good profit margin.

MADSEN SERVICE 3549 NICOLLET AVE. MINNEAPOLIS, MINN.

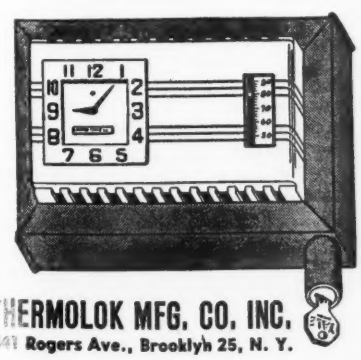
VAPORIZING BURNER SERVICE

A compilation of articles from FUEL-OIL & OIL HEAT by a veteran service manager and an oilheating engineer. Gives important wrinkles and angles of servicing pot-type units. 32 pages, 8½ by 11 inches. Many diagrams.

(Please send remittance with order.) **$1.**

HEATING PUBLISHERS, INC.
2 W. 45 St. New York 36, N. Y.

LOCK YOUR THERMOSTATS WITH *THERMOLOK models*



Guards Your Heat Or Air-Conditioning Settings

EASY TO INSTALL

- No nails or screws.
- No heat lock.
- No holes in wall.
- 15 seconds to install.

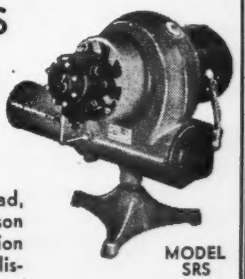
Latest MODEL FOR White-Rodgers 120 Perfex # 100, 200, 135 Delco # CTN Ironfireman Plus all other models

THERMOLOK MFG. CO. INC.
541 Rogers Ave., Brooklyn 25, N. Y.

SOLD *ONLY* THRU

SILENT KORTH OIL HEAT

★ JOBBERS AND DEALERS
★ ONE QUALITY
★ ONE PRICE



MODEL SRS

GE or Ohio motor with thermal overload, Sundstrand pump, Webster or Jefferson ignition transformer, One-piece, precision machined cast iron housing, Minneapolis-Honeywell controls.

ECKHART MFG. CO., INC. UNION NEW JERSEY

Objections Overruled!

(*Begins on page 62*)

names that he can call up and ask them what they think of the work we do."

Pat went over to his desk chair and sat down.

"Thanks, Pat," I said, "You've been a big help. But, tell me, suppose that after all that he still doesn't buy. What then?"

Pat clapped his bald head. "Don't take such a dim view of your chances, son, and you won't have to worry much about not getting the order. But, if you get a Mr. No-go and you seem really licked, you can give him the oh-what-a-poor-salesman-am-I treatment."

"What?"

"Yep, you start to pack up your things but before you really get 'em stowed away, you look at him and say, 'Mr. Prospect, let me ask you a favor. Tell me what's wrong with me.' He'll sputter out something and you'll go on with: 'Yes, Mr. Prospect, everything's so clear to me that you should go ahead with this so it must be my fault that I haven't explained it right to you. Can't you tell me where I've failed in my job as a salesman?' "

Pat went on, "Well, after you've bared your soul to him like this, the chances are that you can learn something. Let him talk.

"You got the answers, all right, Pat," I said and got up to go, then turned back with a smile. "But suppose I'm all set to go into my story and Mr. Prospect tells me that he's all set to move to Florida in a month?"

Pat grinned at me. "Then, m' boy, you wish him a pleasant trip, walk out to your car and give yourself a good kick for getting that far along without finding out about that objection."

Examination Answers

Answers to "Big-Burner" examination that starts on p. 84:
1-D, 2-D, 3-D, 4-A, 5-D, 6-C, 7-A, 8-B, 9-B, 10-A, 11-D, 12-C, 13-B, 14-C, 15-C, 16-C, 17-A, 18-C, 19-A, 20-B, 21-A, 22-C, 23-B, 24-C, 25-A.

Oilheating Trends

(*Begins on page 12*)

Secondary storage of No. 2 fueloil . . . the stocks at distributors bulk plants and major company secondary points are now being reported monthly through the Census Bureau. Their latest figures are for August 31. On that date these stocks east of the Rockies were 19,100,000 barrels. On the same date of the previous year they had been 17,100,000.

DEALER COMMENTS: Typical comments on various questions of the month are these . . . "Oil shortage talk is a lot of nonsense; it's just traditional with the majors" . . . "Our sales are about 13% above last year so far and looks like they will be up 15% to 20% by the end of the year" . . . "Gas competition is keen especially in new building" . . . "New construction warm air installations are going too cheap; several low-priced competitors are in financial difficulty" . . . "It is impossible for us to get oil in the open stock market; who would have such oil to sell?

HOT NEWS!

HERE Next Month from

Metropac

Winter and Summer Air Conditioner with *year 'round Domestic hot water.*

STORAGE

TANKS

of

ALL TYPES AND SIZES

from

275 GAL. OB ROUND UP TO AND INCLUDING 4000 GAL.

also

THREE SIZES OF SEPTICS

SHADYSIDE FOUNDRY

P. O. BOX 507

MARTINS FERRY **OHIO**

THE COST OF MONEY FROM LEXINGTON

Almost without exception, our customers, borrowing on the security of their receivables, paid us less than 1% (one as low as 2/10 of 1%) of their annual sales during their fiscal year. Can you afford to pay that small premium for working capital that enables you to increase your sales at will and to meet your payments promptly?

If you would like to see just what the time-tested Lexington Plan can do for *your* business, call, write, or phone for full particulars. We promise prompt attention—without obligation.

LEXINGTON CORPORATION

Financing from Maine to Maryland

M. S. LURIO, Pres.

10 Milk St., Boston, Mass. **Liberty 2-6878**

60 E. 42d St., New York, N. Y. **MUrray Hill 7-1148**

THE ONLY "ABSOLUTELY TIGHT" VALVE

. . . that works at any piping angle

Less than 2" long. Hold-Tite Valves are ideal for one and two pipe gravity or suction installations.

HOLD-TITE CHECK VALVES . . .

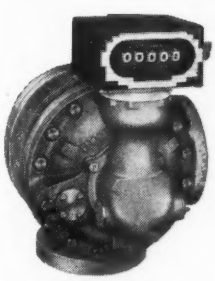
are combination check, anti-hum and anti-syphon valves—guaranteed to hold the vacuum and keep oil in the line. Will not leak, even under difficult vibration conditions. *Costs much less!*

See your jobber or write direct for trial valve. Specify size: ¼", ⅜" or ½".

HOLD-TITE VALVE MFG. CO.

MANUFACTURERS OF QUALITY VALVES & SPECIALTIES

735 LEXINGTON AVE. • **NEW YORK 22, N. Y.**



ROCKWELL

ROTOCYCLE

METERS

for • BULK PLANTS
• TANK TRUCKS
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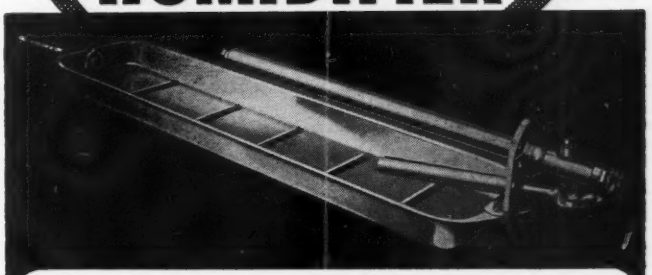
ROCKWELL MANUFACTURING CO.

PITTSBURGH 8, PA.

MORE PROFITABLE TO INSTALL

THERMO-DRIP AUTOMATIC HUMIDIFIER



- VALVES DON'T LIME UP
- NO STAGNANT POOL TO REHEAT
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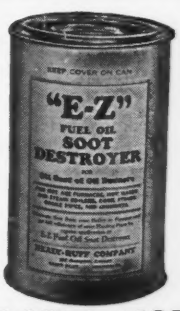

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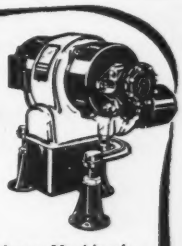

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DEGREE DAY TABLES

ONE MONTH ONLY — October					SEASON TO DATE — Sept. 1 to Oct. 31			
Normal	1951	1952	Percent Change*		Normal	1951	1952	Percent Change*
410	418	566	+ 38.0	Albany	526	591	696	+ 32.3
130	73	207	+ 59.2	Atlanta	142	76	208	+ 46.4
230	148	264	+ 14.8	Baltimore	264	171	272	+ 3.0
338	309	368	+ 8.9	Boston	436	374	430	+ 1.3
410	348	569	+ 38.8	Buffalo	535	506	692	+ 29.3
334	319	434	+ 29.9	Chicago	418	410	519	+ 24.1
274	191	367	+ 33.9	Cincinnati	326	224	387	+ 19.3
354	250	450	+ 27.1	Cleveland	446	340	514	+ 15.2
70	56	144	+105.7	Dallas	75	56	144	+ 92.0
415	488	307	— 26.0	Denver	539	629	367	— 31.9
357	403	497	+ 39.2	Des Moines	456	550	574	+ 25.8
387	332	521	+ 34.6	Detroit	496	448	616	+ 24.1
433	371	555	+ 28.1	Grand Rapids	559	515	662	+ 18.4
368	331	432	+ 17.4	Hartford	474	432	505	+ 6.5
601	730	563	— 6.3	Helena	889	1118	737	— 17.1
27	1	51	+ 88.8	Houston	27	1	51	+ 88.8
299	226	407	+ 36.1	Indianapolis	364	295	458	+ 25.8
242	278	313	+ 29.3	Kansas City	292	346	342	+ 17.1
43	14	13	— 69.7	Los Angeles	48	14	13	— 72.9
218	184	356	+ 63.3	Louisville	252	222	387	+ 53.6
409	440	573	+ 40.1	Milwaukee	529	621	699	+ 32.1
484	506	633	+ 30.7	Minneapolis	647	748	746	+ 15.3
23	7	68	+195.6	New Orleans	23	7	68	+195.6
274	212	325	+ 18.6	New York	325	256	358	+ 10.1
325	387	445	+ 36.9	Omaha	406	515	505	+ 24.4
235	170	295	+ 25.5	Philadelphia	271	195	305	+ 12.5
324	220	411	+ 26.8	Pittsburgh	393	290	449	+ 14.2
459	491	564	+ 22.9	Portland, Me.	638	686	749	+ 17.4
298	290	126	— 57.7	Portland, Ore.	407	337	175	— 57.0
363	277	364	+ .27	Providence	467	348	433	— 7.3
232	190	330	+ 42.2	Roanoke, Va.	270	228	370	+ 37.0
218	211	315	+ 44.5	St. Louis	254	250	325	+ 27.9
377	396	159	— 57.8	Salt Lake City	472	436	178	— 62.3
140	123	200	+ 42.8	San Francisco	262	295	328	+ 25.2
614	615	754	+ 22.8	Sault Ste. Marie	895	978	1003	+ 12.1
372	346	232	+ 37.6	Seattle	546	456	320	— 41.4
369	325	528	+ 43.1	Toledo	467	448	622	+ 33.2
254	140	295	+ 16.1	Washington	297	162	309	+ 4.0

*Compared with normal.

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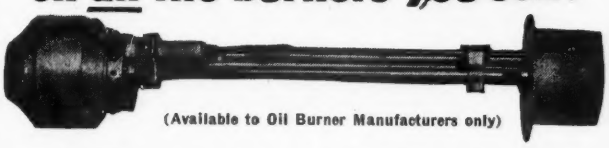

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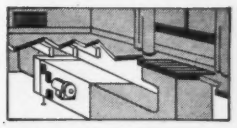

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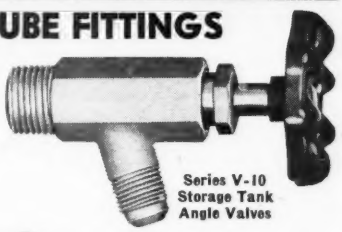

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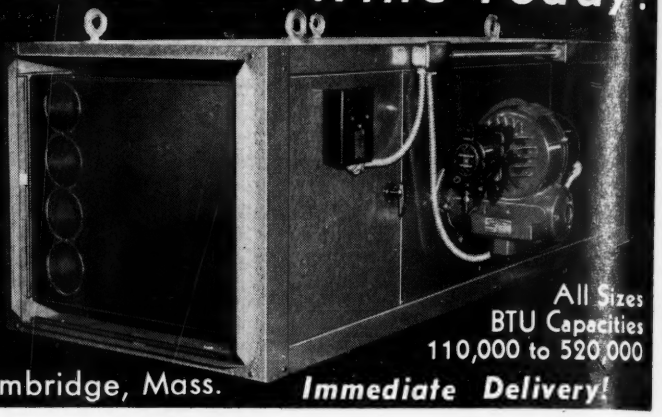

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WANTED—Complete line of furnaces. Gas and oil, also floor furnaces, competitively priced on cost-plus basis, to be sold under our brand name to distributor and dealer trade. Preferably all from one source. Box 1042.

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- Watts developed and introduced the combined (2 in 1) self-closing temperature and pressure relief protection.
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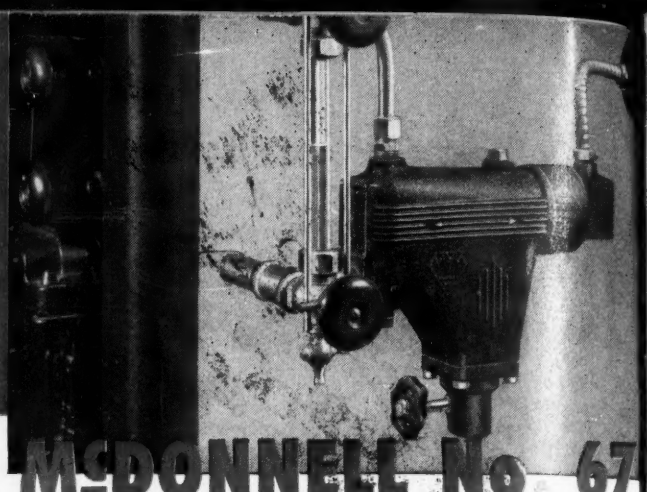
WORLD'S LARGEST MANUFACTURER OF SELF-CLOSING TEMPERATURE AND PRESSURE RELIEF VALVES

MORE

—for you
—for your customer



. . . When you install the McDONNELL No. 67

Low Water Fuel Cut-Off

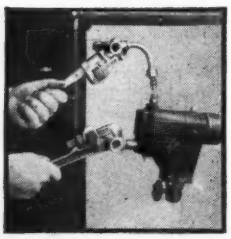
It rarely happens . . . but occasionally you *do* run across a product so far ahead of its field — in quality and downright dollar value — that you marvel at the accomplishment.

You are looking at a shining example of this right now — the McDonnell No. 67 Low Water Cut-off — the most dependable means of stopping the burner on automatically-fired low pressure steam boilers whenever water level falls into the danger zone. If you have ever installed a No. 67 (with your own hands) you don't need to be told this. But if not, we would like to have you consider some of the features that make this your kind of cut-off for those low pressure steam boilers of any size: —

● You save 20 minutes installing it

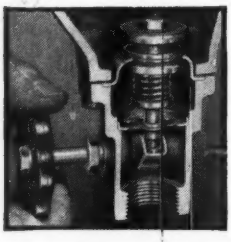
Let's start where the job starts — with the installation. Part of the cost of a cut-off is the cost of installing it — and in these days of high wages every minute you can save gives you and your customer a better deal.

When you take the No. 67 out of its tailored package, you see at once that it's ready for quick installation. Unlike other cut-offs, the parts are in place. Lower nipple and tee are in place — solidly factory mounted. Top tee is specially designed, has quick attachment nut to lock brass tube in place. Blow off valve (more about this later) is in place. Tubing is half-hard brass; not the soft copper tubing that can be bent or squeezed out of shape. It holds its true circle roundness; compression fitting ring slips right over it. Never needs to be filed like soft tubing. As a result of all this, tests show it takes 20 minutes less time to install the No. 67 than any other. This alone will almost pay back the little more the No. 67 costs.



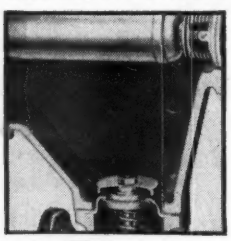
● No other blow-off valve like this—

Having put the No. 67 on the boiler, let's look at the features that give your customer so much more. Take the blow-off valve illustrated here. Instead of a standard half-inch valve thrown into the package for you to install, the No. 67 has that special straight-through, self-closing, big capacity blow-off valve. Its rising stem breaks up any accumulated sediment and the big opening flushes it out clean. Water flushes out far faster than it comes in from the boiler so switch action can be tested. Blowing down a few cups of water causes the switch to act in the No. 67; whereas boiler must sometimes be drained to cut-off level to make the switch act when a standard half-inch valve is used. Ask the insurance men how they feel about blow-off valves that prevent testing, or can be left open inadvertently. The McDonnell Blow-down Valve complies with the ASME Code; ordinary valves do not!



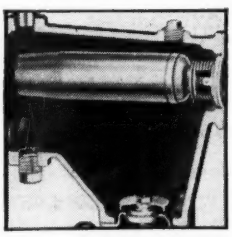
● Most effective sediment removal

The blow-off valve is only part of a complete scheme for eliminating the sediment and silt that could interfere with float action. The rest of the story is the deep sediment bowl of the No. 67. Note that there are no shelves or contours to prevent complete sluicing out of sediment. The smooth V-shaped reservoir catches all sediment and the big blow-off valve sluices it out clean. You can't prevent sediment, but you *can* get rid of it — with the twist of a wrist — in the No. 67.



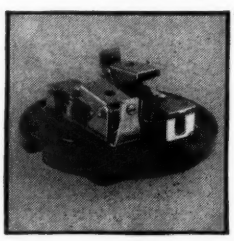
● Finer float and bellows

If you want evidence of top manufacturing quality look at the operating unit of the No. 67. The heavy gauge copper float is soldered by a special high temperature process to a genuine Fulton Sylphon Bellows — joined leak tight and to stay. Notice, too, that the bellows is pivoted in the center to equalize flexing and minimize metal fatigue. A cam and rocker design prevents communication of minor float bobbing to the switch. This is a vital part of a low water cut-off; and the extra quality here puts the No. 67 in a class all its own.



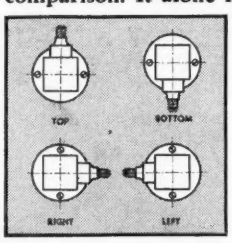
● No other switch like this

The float works the switch, and of course the switch is the heart of a low water fuel cut-off. The No. 67 is the only cut-off with an *extra* switch, (at no extra cost) operating at a higher boiler water level than the fuel cut-off switch. It provides a circuit for an electric (solenoid) water feeder (McDonnell No. 101) or to operate a low water alarm. Both switches are the highly perfected McDonnell snap action type, manufactured throughout in the McDonnell plant. They are Underwriters' approved for a direct A.C. motor load of ½ hp, 115V or 230V — and this rating is significant. Surprising though it may seem, it is far more difficult to handle a load of ½ hp at 115V than at 230V—and that is why so many switches of this kind have only the Underwriters' approval of ½ hp 230V, A.C. This has often proved misleading. The installer may reason that if the switch is approved at 230V it must be approved at 115V. Such an assumption leads to switch failure and trouble. On the other hand if the rating is understood and the switch is used properly — for pilot duty to a line starter — the cost of the starter runs the job far out of line. Look out for this rating pitfall on those larger-motor jobs!



● Wiring is easier, quicker

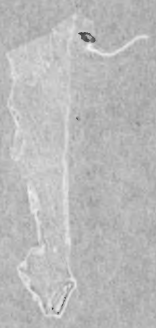
The final step is the wiring, and here too the No. 67 defies all comparison. It alone has a solid junction box with the threaded conduit connector formed as a part of it. No plugs to knock out; no BX collars inside the box; no possibility of tying up the switches with wiring. Just plenty of room to make connections properly and quickly; again cutting the installed cost of the No. 67. On top of this, the No. 67 has the four position adjustment that permits workmanlike wiring—one of those typical McDonnell refinements.



Yes, you'll find evidence of more value, more dependability everywhere you look—in such refinements as the ¼" tapping for convenient wiring of pressure control; in such details as the sparkling black crackle finish; and even in the complete easy-to-follow installation sheets. Yet the installed cost of the No. 67 is little, if any, more. Ask for Condensed Catalog covering the No. 67 and other McDonnell low water fuel cut-offs, boiler water feeders, feeder cut-off combinations and safety relief valves.

McDONNELL & MILLER, Inc., 3500 N. Spaulding Ave., Chicago 18, Ill.

Doing One Thing Well

Your Jobber Stocks Them

McDONNELL *Boiler Water Level Controls*